Vol. IV

TRANSCRIPT OF RECORD

(Pages 1505 to 1994)

Supreme Court of the United States

OCTOBER TERM, 1943

No. 392

UNIVERSAL OIL PRODUCTS COMPANY,
PETITIONER,

vs.

GLOBE OIL & REFINING COMPANY

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SEVENTH CIRCUIT

PETITION FOR CERTIORARI FILED SEPTEMBER 28, 1943.

CERTIORARI GRANTED NOVEMBER 15, 1943.

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IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1942.

No. 912

UNIVERSAL OIL PRODUCTS COMPANY,
Petitioner,

vs.

GLOBE OIL & REFINING COMPANY,
Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

THE GUNTHORP-WARREN PRINTING COMPANY, 724-732 DEARBORN, CHICAGO

IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1942.

No. 392

UNIVERSAL OIL PRODUCTS COMPANY,
Petitioner,

vs.

GLOBE OIL & REFINING COMPANY,
Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

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In the

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For the Seventh Circuit

No. 7912

UNIVERSAL OIL PRODUCTS COMPANY,
Plaintiff-Appellant,

vs.

GLOBE OIL & REFINING COMPANY,
Defendant-Appellee.

Appeal from the District Court of the United States for the Northern District of Illinois, Eastern Division.

THE BUNTHORP-WARREN PRINTING COMPANY, 810 WEST JACKSON, CHICAGO

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In the

United States Circuit Court of Appeals

For the Seventh Circuit

No. 7912

UNIVERSAL OIL PRODUCTS COMPANY,
Plaintiff-Appellant,

vs.

GLOBE OIL & REFINING COMPANY,
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Hall patent No. 1,175,909			7	3194
Zerning patent No. 1,183,266			7	3208
Lambert patent No. 1,245,930			7	3238
Ellis patent No. 1,249,278			7	3248
Coast patent No. 1,250,799			7	3262
814—Prior Art Patents in File Wrapper of Egloff, 1,537,593, except those shown as separate exhibits:				
Perkins patent No. 399,073			7	3116
Lang patent No. 954,575			7	3140
Gillons patent No. 1,084,080			7	3154
Forward patent No. 1,202,823			7	3218
Curran patent No. 1,255,714			7	3268
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No. 1,392,629—C. P. Dubbs, Oct. 4, 1921		3086
No. 1,537,593—G. Egloff, May 12, 1925		3094
No. 7096—Reissue—R. S. Merrill, May 2, 1876		3105
No. 16,877—Reissue—O. Behimer, Feb. 14, 1928		3098
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No. 419,931—J. Dewar, et al., Jan. 21, 1890.....3122
No. 477,153—C. M. Pielsticker, June 14, 1892.....3126
No. 954,575—J. Shaug, Apr. 12, 1910.....3140
No. 1,049,667—W. M. Burton, Jan. 7, 1913.....3150
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No. 1,250,799—J. W. Coast, Jr., Dec. 18, 1917.....3262
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No. 1,281,884—M. J. Trumble, Oct. 15, 1918.....3286
No. 1,285,136—W. A. Hall, Nov. 19, 1918.....3302
No. 1,288,711—L. O. Sherman, Dec. 24, 1918.....3306
No. 1,295,088—A. F. G. P. J. Von Groeling, Feb. 18, 1919.....3318

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No. 1,324,983—R. R. Rosenbaum, Dec. 16, 1919.....3330
No. 1,345,740—P. McD. Biddison, et al., July 6, 1920..3336
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No. 1,407,619—C. M. Alexander, Feb. 21, 1922.....3364
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No. 1,622,737—D. Pyzel, Mar. 29, 1927.....3444
No. 1,638,735—L. C. Huff, Aug. 9, 1927.....3450
No. 1,640,202—F. T. Manley, Aug. 23, 1927.....3456
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No. 1706—Carl M. Pielsticker, 1882.....3539
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No. 6545—Hugh E. Fenchelle, 1914.....3551
No. 15,084—Milton J. Trumble, 1916.....3557
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2222 AGREED STATEMENT AS TO EXHIBITS.

In this record the exhibits, whether plaintiff's or defendant's, are identified by consecutive numbers. The prefix "PX" indicates a plaintiff's exhibit and the prefix "DX" a defendant's exhibit. The page in the original transcript where an exhibit was offered or received in evidence is not noted since most of the record is reproduced in abstract form and all exhibits included in the offered record were duly offered and received in evidence, except where referred to as "for identification" in which case they are included in the record under the provisions of Civil Rule 43 (c).

2223 PX B.

Agreement.

This Agreement, made and entered into this 10th day of November, 1936, by and between The Texas Company, a Delaware corporation, The Texas Corporation, a Delaware corporation, both of whose places of business are the Chrysler Building, Lexington at 42nd Street, New York, New York, and R. J. Dearborn, on the one hand, and Ames, Thiess, Olson & Mecklenberger, counsel for National Refining Company, a corporation of Ohio, on the other hand,

Witnesseth:

Whereas, there is pending in the United States District Court of Kansas a proceeding entitled "Universal Oil Products Company *vs.* National Refining Company, in Equity No. 449-N," which suit is for infringement of Dubbs patent No. 1,392,629 and Egloff patent No. 1,537,593; and

Whereas, there is set up among the defenses in said suit the defense of prior invention of the Dubbs patent by one Otto Behimer; and

Whereas, the said case of Universal Oil Products Company *vs.* National Refining Company has been set for trial at Wichita, Kansas, on January 19, 1937, and by order of court in said cause, entered upon stipulation between counsel for plaintiff and defendant, defendant's time for taking depositions was set to begin on November 1 and to expire on December 15, 1936; and

Whereas, the National Refining Company, defendant in said suit, has caused to be issued from the United States District Court for the Southern District of New York certain subpoenas directed to and heretofore served upon The Texas Company, The Texas Corporation, R. J. Dearborn and Frederick T. Manley of The Texas Corpora-
2224 tion and The Texas Company, directing them jointly and severally to appear before William F. Smart, a notary public, at the rooms of A. Arnold Brand, at the Waldorf-Astoria Hotel, New York, New York, on the 12th day of November, 1936, to testify, by way of depositions, in said suit, and to bring with them the documents identified in the list attached to the said subpoenas, a copy of which list is hereto attached; and

Whereas, upon the service of said subpoenas, the said R. J. Dearborn expressly stated that it would require a considerable amount of time to collect and present the documents called for in the subpoenas and that it would therefore be impossible to present said evidence on the return day of said subpoenas (November 12, 1936); and

Whereas, the said R. J. Dearborn, on his own behalf and on behalf of said The Texas Corporation and said The Texas Company, undertook to collect such records and present the same, together with all witnesses (in so far as it is possible) familiar with the defense of prior invention by Otto Behimer, in open court at the trial at Wichita, Kansas, on January 18, 1937, and in the meantime, whenever requested by counsel for National Refining Company, to make available to the latter for examination and copies of the hereinbefore recited and all other pertinent documents; and

Whereas, in view of said statement and undertaking, counsel for the National Refining Company has agreed for the present to withhold proceeding to take said evidence by depositions and to withhold an application for a contempt citation when and if said documents and witnesses heretofore indicated in the subpoenas do not appear at the place and on the date named therein;

Now, Therefore, in consideration of the surrender by National Refining Company and its attorneys of their right to proceed to take the said evidence under the sub-
2225 poenas heretofore served upon the parties hereinbefore named, The Texas Company, The Texas Corporation, and R. J. Dearborn covenant and agree to co-

operate fully with counsel for the National Refining Company in the full presentation of the defense of prior invention by said Otto Behimer and the commercial use thereof by The Texas Company in the trial of said case of Universal Oil Products Company *vs.* National Refining Company in open court at Wichita, Kansas, on January 19, 1937, and from day to day thereafter until the close of proofs in said cause, said co-operation to be evidence in part as follows:

(1) By producing at the trial of said cause at Wichita, beginning January 19, 1937, or upon any other date or place to which said trial may be adjourned, such of the said witnesses upon whom subpoenas have already been served and any other witnesses, irrespective of their residence (in so far as it is possible), having knowledge of the said defense of prior invention by Otto Behimer and whose presence shall be requested by National Refining Company.

(2) By producing at the said trial on the said date, or upon any other date or place to which said trial may be adjourned, the documents and movable exhibits outlined in the list hereto attached, and also to produce and make available to the defendant in said cause all other evidence known to and available by The Texas Company, The Texas Corporation, and R. J. Dearborn, whether physical, documentary, or oral, which, in the opinion of counsel for the National Refining Company is material, relevant, or pertinent to the establishment of said defense of prior invention by Otto Behimer.

(3) From the date of this agreement until proofs shall have been closed in said trial, at all reasonable hours to permit the attorneys and/or agents for the National
2226 Refining Company to examine, become familiar with, and make copies (photostatic or otherwise) of the documents, exhibits and other material referred to herein and any other exhibits of whatever nature, having any bearing upon the said defense of prior invention by Otto Behimer, and to make available for examination by said attorneys for National Refining Company prior to the trial, when requested so to do by the latter, all the said witnesses who have heretofore been served with subpoenas, and, in so far as it is possible, all other witnesses who may have knowledge of the facts with regard to said defense.

On behalf of the National Refining Company the said Ames, Thiess, Olsen & Mecklenburger agree that if the said evidence of priority by Otto Behimer is presented in

the case hereinbefore mentioned, the same will be fully and adequately presented and adduced, so as to establish said issue of priority of invention as between the said Otto Behimer and Carbon P. Dubbs, the patentee of the United States Patent No. 1,392,629, in favor of Otto Behimer.

In Witness Whereof, the corporate parties have caused these presents to be executed by their duly authorized officers and their corporate seals attached, and the individual parties had set their hands and seals the day and year first above written.

The Texas Company,
By (s) Harry T. Klein,
(Seal) *Vice-President.*

Attest:
(s) W. G. Elicker,
Asst. Secretary.

The Texas Corporation,
By (s) Harry T. Klein,
(Seal) *Vice-President.*

Attest:
(s) W. G. Elicker,
Asst. Secretary.

(s) R. J. Dearborn. (Seal)
Ames, Thiess, Olson & Mecklenburger,
By (s) J. Bernhard Thiess.

2227 PX 501.

Filed Mar. 26, 1942. Hoyt King, Clerk.
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DEPARTMENT OF COMMERCE,

United States Patent Office.

To all persons to whom these presents shall come, Greeting:

This Is To Certify that the annexed is a true copy from the records of this office of the File Wrapper and Contents, in the matter of the Letters Patent of Carbon P. Dubbs, Number 1,392,629, Granted October 4, 1921, for Improvement in Processes of Converting Hydrocarbons.

In Testimony Whereof I have hereunto set my hand and

caused the seal of the Patent Office to be affixed, at the City of Washington, this twenty-seventh day of October, in the year of our Lord one thousand nine hundred and thirty-six and of the Independence of the United States of America the one hundred and sixty-first.

Conway P. Coe,
(Seal) *Commissioner of Patents.*

Attest:
D. E. Wilson,
Chief of Division.

2228 1919

Number (Series of 1915), 283673 (Ex'r's Book) 90 249

Div. 31 Patent No. 1392629 Oct. 4, 1921.

Name Carbon P. Dubbs.
of Wilmette,
County of .....
State of Illinois
Invention Process of Converting Hydrocarbons.
Parts of Application Filed.

	Original	Renewed
Petition	Mar. 14, 1919	....., 191
Affidavit	Mar. 14, 1919	....., 191
Specification	Mar. 14, 1919	....., 191
Drawing 2 Shts	Mar. 14, 1919	....., 191
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First Fee Cash $15	Mar. 19, 1919	....., 191
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Appl. filed complete	Mar. 19, 1919	....., 191
Examined and Passed for Issue	Apr. 29, 1921	....., 191
W. N. Holmes Acting	Exr. Div. 31	Exr. Div.
Notice of Allowance	May 4, 1921	....., 191
	By Commissioner.	*By Commissioner.*

Final Fee Cash $20
Sept. 7, 1921 ....., 191..
Final Fee Cert. ....., 191.. ....., 191..
Patented Oct. 4, 1921.
Associate Attorney .....
Attorney ~~*Frank L. Belknap, #1011 1st Nat'l Bk. Bldg., Chicago, Ill.*~~

(No. of Claims Allowed 9 ~~8~~) Print Claims 1 in O. G.
(Cl. 196-25)
Title as Allowed Process of Converting Hydrocarbons.
(In left-hand margin:)
Division of App., No. ....., filed .....,
191..

2229 (Letterhead of Frank L. Belknap, Chicago.)

(Stamp) Mail Room Mar 14 1919 U. S. Patent Office.

Mar. 12, 1919.

Hon. Commissioner of Patents,
Washington, D. C.

Sir:

I enclose herewith application papers in the name of Carbon P. Dubbs for Letters Patent on Process of Converting Hydrocarbons, togteher with two sheets of drawings and check for $15.00 as filing fee.

Respectfully,

F. L. Belknap.

2230

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4719

(Stamp) Mail Room Mar 14 1919 U. S. Patent Office.

PETITION.

Honorable Commissioner of Patents:

Your petitioner, Carbon P. Dubbs, a citizen of the United States residing in the City of Wilmette, Conuty of Cook, and State of Illinois, whose postoffice address is 905 Greenleaf Avenue, Wilmette, Illinois, prays that Letters Patent of the United States may be granted to him for new and useful improvements in

described and claimed in the annexed specification; and he hereby appoints Frank L. Belknap, 1014 First National Bank Building, Chicago, Illinois, his attorney, with full power of a substitution and revocation, to prosecute the application to make alterations and amendments therein, to receive the Patent and to transact all business in the Patent Office connected therewith.

Signed at Independence, Kansas, this 8th day of March, 1919.

Carbon P. Dubbs.

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2231 SPECIFICATION

To All Whom It May Concern:

Be It Known that I, Carbon P. Dubbs, a citizen of the United States, residing in the city of Wilmette, county of Cook and State of Illinois, have invented certain new and useful improvements in Processes of Converting Hydrocarbons, of which the following is a specification.

This invention relates to improvements in processes of converting hydrocarbons and refers more particularly to an improved form of cracking process of the continuous type. Among the salient objects of the invention are to provide a process in which the oil is continuously fed through the cracking zone and thence through the vapor zone, and a portion of the generated vapors condensed and returned to the inlet side of the cracking zone for further treatment; to provide a process of the character above referred to in which the carbon containing residue is continuously removed from the cracking zone while the reflux condensate is returned to the cracking zone for further treatment substantially free from

carbon; to provide a process which permits of the apparatus being
operated for an extended period without the necessity of cleaning
Per B and in which that part of the system containing the *(PRE)~~per~~cipitated
carbon, is free from subjection to any excessive heat; to provide
a process in which the reflux condensate is continuously removed
from the refluxing condensing apparatus and returned to the inlet
side of the system; to provide a process in which the vapors not
initially condensed are finally caused to pass through a single passage for a secondary condensing action and in general to provide an
improved process and also a novel apparatus of the character referred
2232 to.

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The claims of the present invention are directed more particularly to the process, although it is to be understood
that the apparatus itself is novel.

In the drawings:

Fig. 1 is a sectional side view.

Fig. 2 is a sectional plan view.

Describing the apparatus, A and A-1 are the furnaces. A-2 the flue tunnel, A-3 the stack.

B are the cracking tubes. C are the vaporizing tubes, D are the vapor tubes connected with the vaporizing
tubes C. E are the slanting portions of the vapor tubes. F is
the drainage line from the vapor tubes to the B tubes situated
in the furnace A, connected by line F-1 into line J-1 and on
line F-1 is valve H-5. G is the manifold connecting with the

* Matter in parentheses inserted.

slanting vapor tubes E and also connecting with aerial condenser
G-1 which latter connects with vapor line G-2 to water cooled
condenser G-3 and on which is valve H. J is a standard high
pressure liquid pump connected with any source of supply not
shown. J-1 is the discharge from said pump into coils B. K
is the residuum line connected with the 10″ tube and positioned
in it pressure valve H-1. H-2, H-3, H-4 are try cocks.

Describing the operation of the process, the material to be treated is drawn from any suitable source by
means of the pump J and discharged therefrom through line J-1
into and through tubes B and during the time they are passing
through said tubes, they are subjected to sufficient heat to

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2233 cause the desired amount of cracking. Said oil is then
passed into the tubes C which are only partially filled with
the oil and as the oil passes through these tubes, there is
a liberation of vapors from same and which vapors pass up
through the vapor tubes D, E and into header G and through
aerial condenser G-1, through line G-2, through water condenser
G-3 and discharged through pressure regulating valve H. The
portion of vapors condensed while passing through vapor lines
E, manifold G and aerial condenser G-1 are automatically drained
back through these lines into drainage line F and from there

through line F-1 enter into line J-1 and back into the heating
tubes B. The residue left in the coils C is drawn off through
line K through pressure regulating valve H-1 to any suitable place.
Pressure is maintained on the entire apparatus and is regulated
by the valve H.

A light fire may be maintained under the tubes C as
shown in the drawings or said tubes may be heavily insulated
with cel-o-cel insulating material or any other well known
insulating material to prevent loss of heat by radiation and
thereby dispense with the fire under the tubes C. The level
of the liquid in the tubes C is ascertained by try-cocks H-2,
H-3, H-4 and the level controlled by valve H-1. The percent
of vapors generated from the oil as it passes through the tubes
C will depend on the amount of heat acquired by said oil while
passing through the 4" coils.

I do not wish to confine myself to the above described

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2234 operation except as to illustrate the principal involved
and which principal may be appliable in various arranged
apparatus.

For instance, the reflux distillates may be returned to the heating coils B directly or indirectly, part
Per A of them direct and part of them indirect ~~either mixed or not~~
" A ~~mixed with a supply of fresh oil.~~ For instance, instead of
returning the reflux condensate direct to the tubes marked

B by means of line F-1, the same may be discharged into a
tank marked L through line L-1 by opening the valve H-6 which
otherwise would remain closed and closing the valve H-5 on line
F-1 or part of the condensate may be returned directly back to
the tubes B through line F-1 by regulating the opening of
valve H-5 and the rest discharged to tank L through line L-1
by regulating the opening of valve H-6. Tank L may be maintained under pressure or not and it may contain the raw
material that is being treated or contain wholly the reflux
" A distillate and from this tank the contents of same
*(ARE) ~~is~~ fed
" A to the tubes B through line *(M) ~~N~~ into pump J and from there dis-
Per A charged into line J-1. ~~*Or if tank L is maintained under*~~
" A ~~*sufficient pressure, the discharge line may by-pass the pump*~~
" A ~~*and enter direct into tubes B and the flow regulated by valve*~~
" A ~~*H-7.*~~

It will be noted that the reflux condensate in all cases is trapped off from the vapor lines in such manner as to
prevent their returning direct to the vaporizing tubes C.

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2235 I Claim as My Invention:

~~*1. A process of converting heavy into lighter hydrocarbons, consisting in passing the oil through a heating coil in a cracking zone, passing the oil and generated vapors into*~~

*Matter in parentheses inserted.

a vapor chamber, taking off the vapors from said vapor chamber, condensing a portion of said vapors and returning them to the inlet end of the heating coil through a conduit independent of the vapor chamber, finally condensing the remainder of said vapors and maintaining a pressure of the vapors on the system during distillation and condensation.

2. A process of converting heavy into lighter hydrocarbons, consisting in passing the oil through a heating coil in a cracking zone, passing the oil and generated vapors into a vapor chamber, taking off the vapors from said vapor chamber, condensing a portion of said vapors and returning them to the inlet end of the heating coil through a conduit independent of the vapor chamber, finally condensing the remainder of said vapors, maintaining a pressure of the vapors on the system during distillation and condensation, continuously feeding a fresh supply of oil to the heating coil and continuously removing the unvaporized residue from the vapor chamber.

3. A process of converting heavy into lighter hydrocarbons consisting in passing oil through a heating coil in a cracking zone, passing the oil into a vapor chamber, taking off the vapors from said chamber through a plurality of

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condensing a portion of said vapors and returning them to the inlet side of the heating coil and causing the uncondensed vapors

~~to finally go through a single condensing passage and maintaining a pressure on the vapors during distillation and condensation.~~

Carbon P. Dubbs.

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2237 OATH.

State of Kansas, } ss.
County of Montgomery. }

Carbon P. Dubbs, the above-named petitioner, being first duly sworn, deposes and says that he is a citizen of the United States, now residing in the City of Wilmette, County of Cook, and State of Illinois; that he verily believes himself to be the first, original and sole inventor of the new and useful improvements in

Process of Converting Hydrocarbons described and claimed in the annexed specification; that he does not know and does not believe that the same was ever known or used before his invention or discovery thereof, or patented or described in any printed publication in any country before his invention or discovery thereof, or more than two years prior to this application, or in public use or on sale in the United States for more than two years prior to this application; that said invention has not been patented in any country foreign to the United States on an application filed by him, or his legal representatives or assigns, more than twelve months prior to this application; and that no application for patent on said improvements has been filed by him, or his legal representatives or assigns, in any country foreign to the United States.

Carbon P. Dubbs.

Subscribed and sworn to before me this 8th day of March, 1919.

Ernest Sewell,
Notary Public.

My commission illegible 5, 1917.

9

2238 Department of the Interior
United States Patent Office
Washington

NJB

(Stamp) $..... rec'd Mar 19 1919 C. C. U. S. Pat Office.

March 14, 1919.

Mr. F. L. Belknap,
1014 First National Bank Bldg.,
Chicago, Ill.

Sir:

The check for $15.00 (No. 4506) received with your letter of March 12, in payment for filing the application of Carbon P. Dubbs, is returned herewith for endorsement.

Respectfully,

M. H. Coulston,
Chief Clerk.

10

Enclosure.

2239 Department of the Interior
United States Patent Office
Washington

R/AMT

(Stamp) Patent Office May 24 1919 Mailed.

May 24, 1919.

Frank L. Belknap
1014 Nat'l Bank Bldg.
Chicago, Ill.

Please find below a communication from the Examiner in charge of the application of Carbon P. Dubbs, filed Mar. 19, 1919, serial No. 283,673, for Process of Converting Hydrocarbons.

James T. Newton,
Commissioner of Patents.

If this case shall be further prosecuted, applicant is requested to apply additional legends directly upon the face of the drawing, to facilitate the reading of it.

The construction referred to in lines 4 to 7, page 4 should be shown or reference thereto should be eliminated; also those referred to in lines 4 to 7 from the bottom of page 4. It is not clear how the tank L may be maintained under sufficient pressure, or how the discharge line may by-pass the pump.

The preferred "sufficient heat", referred to at the bottom of page 3, and the preferred pressure as referred to near the middle of page 3, as well as the preferred actual dimensions, rate of feed, etc., suitable to an apparatus for some stated yield of named products from named raw materials, should have been fully set forth. For lack of suitable supporting disclosure, all claims are rejected.

"Is", line 18, page 4, should apparently be —are—, and "N." in the line following should be —M—.

Words appear to have been inadvertently omitted from claim 3, and the word "and" is misspelled in line 6 of this claim.

All claims are additionally rejected as failing of any patentable distinction, or any indicated advantage

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2240 over Coast, 1,250,799, Dec. 18, 1918, 196-31, (in which 11 may be compared with applicant's first-mentioned heating coil) or over Lambert, 1,245,930, Nov. 6, 1916, x 196-38, in view of Ellis, 1,249,278, Dec. 4, 1917, 196-35. The letter patent shows the return of a first condensate to the beginning of a preheating coil and the employment of this expedient (if it has any special advantage) in the device of Lambert, cited or in any of the following would require no invention:

Hall,	1,175,909, Mar. 14, 1916,	196-35, or
Hall,	1,194,289, Aug. 8, 1916,	196-31, or
Zerning,	1,183,266, May 16, 1916,	196-32, or
Dubbs,	1,123,502, Jan. 5, 1915,	196-31.

Care should be taken to maintain a proper line of division between this and applicant's numerous copending cases, and if the foregoing rejection on the ground of insufficient disclosure shall be traversed, there should be placed in the record fully informative affidavits as to the actual work, if any, upon which applicant's rights, if any, may be based.

G. A. Lovett,
Examiner.

12

2241 (Stamps) Application Room Sep 16 1919 U. S. Patent Office. U. S. Patent Office Serial No. ..... received Sep 18 1919 Division 31, Paper No. 3. Room 169
Carbon P. Dubbs,
Process of Converting Hydrocarbons,
Filed March 19, 1919,
Serial #283,673.

September 5, 1919.

Hon. Commissioner of Patents,
Washington, D. C.

Sir:

Page 4, lines 6 and 7, cancel commencing with the word "either" through the word "oil".

Same page, lines 20 to 23 cancel commencing with the word "Or" through "H-7".

After the sentence ending the last line of page 4 insert:—

A[1] An illustrative run of the described apparatus, in accordance with my process, is as follows:
Gas oil from mid continent crude oil, such as Kansas, or Oklahoma, oils of 32 to 36 Baume gravity is
taken and continuously supplied to the pump J and thence
to the 4 inch coils B which are subjected to a temperature
of 750° to 860° F. The heated oil then passes to the
10 inch coils C which are maintained about half full of
oil and wherein vaporization takes place. The residue
is constantly drawn off through the pipe K to a suitable
storage. The vapors pass up through the lines D to the
pipe E into the manifold G and from thence into the aerial

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2242 condenser G' where the heavier distillates are condensed
and the lighter distillates pass on to the water cooled

condenser G^3. The reflux condensation is diverted and returned to the inlet side of the tubes B, either directly through the lines F, F', or indirectly through the line F, tank L and line M to the pump. A pressure of approximately 100 lbs. to the square inch is maintained on the oil during treatment which is caused by the pressure of the generated vapors. This pressure is regulated by the valve H.

The gravity of the distillate discharge from the water cooled condenser is about 52 to 56 Baume and in quantity is approximately somewhat more than half of the gas oil subjected to treatment.

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see 4724

(Claims)

Page 4, line 18, change "is" to are. Line 19 change "N" to M.

Cancel the claims and insert:

A^2 ~~1. A continuous process for converting relatively heavy into a lighter hydrocarbon, consisting in passing a stream of oil under pressure through a cracking zone and thence into a chamber wherein vaporization takes place, withdrawing from said chamber the residue, passing the vapors from the chamber to an initial condenser and then to a secondary condenser, conducting substantially all the products of condensation in the passage of the vapors to and through the initial condenser to the body of oil entering the~~

Sub B1

2243 ~~inlet side of the cracking zone and maintaining the pressure of the vapors on the system during the distillation and condensation~~

~~2. A process for the treatment of hydrocarbon oils under the pressure of the vapors generated therefrom consisting in passing a stream of oil under pressure through a heating zone, thence to a vaporizing chamber, and discharging the residue therefrom, subjecting the vapors passing from said chamber to condensation, and returning a selected part of the condensates with a fresh supply of oil to the action of the heating zone.~~

~~3. A continuous process for converting heavy into lighter hydrocarbons, under the pressure of the vapors generated therefrom consisting in passing a body of oil under pressure through a cracking zone and thence into a receiving chamber, wherein vaporization takes place, drawing off from said chamber the residue and conducting the vapors from said chamber to an initial condenser and then to a secondary condenser and conducting the major part of the products of condensation from the vapors passing to and through the initial condenser to the body of oil entering the cracking zone.~~

~~4. A process for converting heavy into lighter hydrocarbons, under the pressure of the generated vapors consisting in continuously passing a stream of fresh oil to a cracking zone and thence to a vapor chamber, drawing off from the latter the unvaporized portion~~

of the oil, conducting the vapors from said chamber to an initial condenser and passing the lighter vapors to a secondary condenser and continuously subjecting the products of condensation occurring in the initial condenser to re-cracking.

15

2244 6. A process for converting heavy into lighter hydrocarbons, under the pressure of the generated vapors consisting in passing a stream of oil to a cracking zone, thence to a vaporizing chamber and thence to storage, passing the products of vaporization occurring in said vapor chamber to a water-cooled condenser and the condensates occurring therein to storage and diverting from the line of travel of said vapors the major portion of the condensates occurring in the passage of vapors from said vapor chamber to the water-cooled condenser and collecting the same in a reservoir and finally subjecting said condensates to a re-cracking action.

6. A process for converting heavy into lighter hydrocarbons, consisting in passing a stream of oil to a cracking zone, thence to a vaporizing chamber and thence to storage, passing the products of vaporization occurring in said vapor chamber to a water-cooled condenser and the condensates occurring therein to storage and diverting from the line of travel of said vapors a portion of the

condensates occurring in the passage of vapors from said vapor chamber to the water-cooled condenser and collecting the same in a reservoir and finally subjecting said condensates to a re-cracking action by introducing said condensates into the stream of oil being supplied to the cracking zone.

7. A continuous process for converting heavy into lighter hydrocarbons, consisting in passing a stream of oil under pressure in one general direction from a supply to a discharge, said body in its passage traversing a cracking zone and a vaporizing chamber, withdrawing from

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said chamber the vapors arising from the oil passing therethrough and passing the same in one general direction to a final condenser and subjecting the same to a condensing action, diverting a portion of the products of condensation occurring in the passing of the vapors from said vaporizing chamber to the final condenser and supplying the same to the aforesaid stream of oil prior to its entrance into the cracking zone, and maintaining on the medium under treatment a pressure of the vapors generated during the operation of the process.

8. A process of converting heavy into lighter hydrocarbons, consisting in passing a stream of oil over a heated zone of re-action and thence to a

~~*vapor chamber, drawing off unvaporized portions of the oil from said chamber, conducting the vapors to a condenser and subjecting the condensates therefrom to a second reaction for producing further hydrocarbons, the process being carried out under the pressure of the generated vapors.*~~

Insert B[1]

REMARKS.

Before final action additional legends will be applied to the drawings, as suggested by the Examiner.

It is submitted that the original disclosure is sufficient to enable one skilled in the art to practice the invention, but for facilitating the operation of the process certain hydrocarbons applicant has added to the specification a specific description of a selected run.

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2246 It is thought that the present claims sharply distinguish applicant's process from the various processes found in the prior art so that a detailed discussion thereof is unnecessary, but applicant's attorney will arrange to appear in person before the Examiner prior to the consideration of this amendment for the purpose of pointing out, should it become necessary, wherein the prior art fails to disclose the subject-matter now claimed.

Respectfully,

Carbon P. Dubbs,
By Frank L. Belknap,
Attorney.

18

WFG:SC

2247 Div. 31 Room 169

Address only "The Commissioner of Patents, Washington, D. C.," and not any official by name.

Paper No. 4

All communications respecting this application should give the serial number, date of filing, title of invention, and name of the applicant.

Department of the Interior

United States Patent Office

Washington

March 4, 1920

H/AMT

(Stamp) Patent Office Mar 4 1920 Mailed.

Frank L. Belknap
1014 First Nat'l Bank Bldg.
Chicago, Ill.

Please find below a communication from the Examiner in charge of the application of Carbon P. Dubbs, filed Mar. 19, 1919, serial No. 283,673, for Process of Converting Hydrocarbons.

James T. Newton,
Commissioner of Patents.

Amended September 16, 1919.

"Precipitate", page 1, line 8 from below, is misspelled,

Edwards 1,170,884, Feb. 8, 1916 196-14

is made of record. This patent contemplates pressure-distillation and positively states that the gasoline is drawn off from time to time from the water condenser 31. To substitute a water-cooled condenser for the series of aerial condensers of Edwards would not be patentable. The claims are all rejected as without invention over this patent.

Ellis, of record, is considered a pertinent reference to claims like the claim 2.

Smith 1,239,423 Sept. 4, 1917 196-31 and
(British) Trumble 15,084 of 1915 "

are made of record.

The claims are not seen to involve invention over Smith in connection with the British patent.

E. T. Ragan,
Examiner.
19

W. N. H.

2248 IN THE UNITED STATES PATENT OFFICE

(Stamps) Mail Room Jul 6 1920 U. S. Patent Office
Paper No. 5 Jul 7 1920 Division B.

In re Application of
Carbon P. Dubbs,
Process of Converting Hydrocarbons,
Serial No. 283,673,
Filed, March 19th, 1919
Hon. Commissioner of Patents,
Washington, D. C.

Sir:

In response to Office Action of March 4th, 1920, will the Examiner kindly amend the above application as follows:

Page 1, line 20, correct spelling of "precipitated".

Rewrite the claims as follows:

Sub. C¹
Cls 1-6 of pnt)

B¹ ~~1. A process of converting heavy into lighter hydrocarbons consisting in passing a body of oil through a heated zone of reaction and thence to a vapor chamber where vaporization takes place, drawing off the unvaporized residue from said vapor chamber continuously, conducting the vapors to a condensor, subjecting condensates therefrom to a second reaction for producing further lighter hydrocarbons and maintaining the reaction zone free from residual products of the vapor chamber the process being carried out under the pressure of the generated vapors.~~

2. A process of converting heavy into lighter hydrocarbons consisting in passing a body of oil through a

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heated zone of reaction and thence to a vapor chamber where
vaporization takes place, drawing off the unvaporized residue
from said chamber, conducting the vapors to a condenser,
subjecting condensates therefrom to a second reaction for
producing further lighter hydrocarbons and maintaining the
reaction zone free from residual products of the vapor chamber
the process being carried out under the pressure of the generated
vapors.

3. A process of converting heavy into lighter hydrocarbons consisting in passing a body of oil through a
heated zone of reaction and thence to a vapor chamber where
vaporization takes place, drawing off the unvaporized residue
from said vapor chamber, conducting the vapors to a condenser,
subjecting condensates therefrom to a second reaction for
producing further lighter hydrocarbons and maintaining the
reaction zone free from residual products of the vapor chamber.

4. A process of converting heavy into lighter hydrocarbons consisting in continuously passing a stream of
oil through a heated zone of reaction and thence to an en-
larged chamber where vaporization takes place, continuously
drawing off the residue in said vapor chamber, removing the
vapors from said chamber and condensing them, returning a portion

~~of the condensates to a heated zone of reaction for further treatment, continuously passing the oil in one direction so as to prevent the fresh oil and condensates which are retreated from mixing with the residue in the zone of reaction and maintaining a vapor pressure on the oil during distillation and condensation.~~

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2250 ~~5. A process of converting heavy into lighter hydrocarbons consisting in passing a stream of oil through a heated zone of reaction and thence to an enlarged chamber where vaporization takes place, continuously drawing off the residue in said vapor chamber, removing the vapors from said chamber and condensing them, returning a portion of the condensates to a heated zone of reaction for further treatment, continuously passing the oil in one direction so as to prevent the fresh oil and condensates which are retreated from mixing with the residue in the zone of reaction and maintaining a vapor pressure on the oil during distillation and condensation.~~

~~6. A process of converting heavy into lighter hydrocarbons consisting in continuously passing a stream of oil through a heated zone of reaction and thence to an enlarged chamber where vaporization takes place, drawing off the residue in said vapor chamber, removing the vapors from said chamber and condensing them, returning a portion of the~~

condensates to a heated zone of reaction for further treatment, continuously passing the oil in one direction so as to prevent the fresh oil and condensates which are retreated from mixing with the residue in the zone of reaction and maintaining a vapor pressure on the oil during distillation and condensation.

7. A process of converting heavy into lighter hydrocarbons consisting in continuously passing a stream of oil through a heated zone of reaction and thence to an enlarged chamber where vaporization takes place, continuously

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drawing off the residue in said vapor chamber, removing the vapors from said chamber and condensing them, returning the condensates to a heated zone of reaction for further treatment, continuously passing the oil in one direction so as to prevent the fresh oil and condensates which are retreated from mixing with the residue in the zone of reaction and maintaining a vapor pressure on the oil during distillation and condensation.

8. A process of converting heavy into lighter hydrocarbons consisting in continuously passing a stream of oil through a heated zone of reaction and thence to an enlarged chamber where vaporization takes place, continuously drawing off the residue in said vapor chamber, removing the vapors from said chamber and condensing them, returning a

portion of the condensates to a heated zone of reaction for
further treatment, continuously passing the oil in one direc-
tion so as to prevent the fresh oil and condensates which are
retreated from mixing with the residue in the zone of reaction
and maintaining a vapor pressure on the oil during distillation.

9. A process of converting heavy into lighter hydrocarbons consisting in continuously passing a stream of
oil through a heated zone of reaction and thence to an en-
larged chamber where vaporization takes place, continuously
drawing off the residue in said vapor chamber, removing the
vapors from said chamber and condensing them, returning a
portion of the condensates to a heated zone of reaction for
further treatment, continuously passing the oil in one direc-

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2252 tion so as to prevent the fresh oil and condensates which
are retreated from mixing with the residue in the zone of
reaction.

10. A process of converting heavy into lighter hydrocarbons consisting in passing a stream of oil through
a heated zone of reaction and thence to an en-larged chamber
where vaporization takes place, drawing off the residue in said
vapor chamber, removing the vapors from said chamber and con-
densing them, returning the condensates to a heated zone of
reaction fur further treatment, continuously passing the oil

~~*in one direction so as to prevent the fresh oil and condensates which are retreated from mixing with the residue in the zone of reaction.*~~

B¹ *(7) ~~11.~~ A process of cracking oil consisting in continuously passing a stream of oil through a series of

Insert C² tubes seated in a cracking zone ∨ and thence to an enlarged C² vapor chamber where vaporization takes place, removing the vapors from said chamber, subjecting them to an initial condensor where a portion of the vapors are condensed, subjecting the uncondensed portion of the vapors to a final condensation, returning the condensate from said initial condensation to the inlet side of the cracking tubes and continuously drawing off the residue from the vapor chamber and preventing it from returning to the cracking zone and maintaining a pressure on the oil during treatment.

*(8) ~~12.~~ A process of cracking oil consisting in

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2253 progressively passing the oil through a ~~*heated*~~ Sub. C³ ~~*cracking zone*~~ C³

Per C and (THEN PASSING THE HEATED OIL THROUGH C³) a vaporizing zone, forcing the carbon containing residue out of the system and preventing it from coming in contact

Per C with the incoming charging stock, taking off vapors (FROM THE VAPOR ZONE) and condensing them and returning condensate therefrom to and

* Matter in parentheses inserted.

mixing it with the fresh charging stock which is being passed
through said zone.

Insert D[1]
Cl. 9

REMARKS

The claims have been rewritten in order to more clearly distinguish from the references and in order that they may more graphically state the essence of the invention. The practical difficulty experienced with cracking processes now in use is carbon trouble. In every one of the references cited where the reflux condensate is retreated in the zone of reaction it is mixed with the circulated or with part of the circulated carbon containing residue in which the carbon containing residue is further subjected to heating. It is of course desirable and in fact may be commercially necessary to retreat the reflux condensate for the reason that the reflux condensate has not yet been sufficiently cracked. This reflux condensate is freed from the carbon produced in its formation which carbon goes into the residual product and it will be seen that this reflux condensate can be retreated without producing an excessive amount of carbon. If, however, the carbon containing residue which has the accumulation of carbon formed during reaction, is reheated and subjected to further cracking temperature, the production of carbon becomes excessive. By means of the present invention this excessive

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2254 formation of carbon is avoided.

This process is not a paper process. An apparatus constructed just as the apparatus shown in the present application is commercially operated and by means of this invention applicant is able to avoid these carbon troubles and is able to carry out his process continuously and uninterruptedly over a very extended period of time.

The case is now thought to be in condition for formal allowance.

Respectfully submitted,

Frank L. Belknap.

Chicago, Illinois,
July 2, 1920.

26

2255 2—260

Div. 31 Room 169

Address only "The Commissioner of Patents, Washington, D. C.," and not any official by name.

Paper No. 6

All communications respecting this application should give the serial number, date of filing, title of invention, and name of the applicant.

DEPARTMENT OF THE INTERIOR

WNH/AMT United States Patent Office

Washington

July 28, 1920.

(Stamp) U. S. Patent Office, Jul 28 1920 Mailed.

Frank L. Belknap
1014 First National Bank Bldg.
Chicago, Ill.

Please find below a communication from the Examiner in charge of the application of Carbon P. Dubbs, filed Mar. 19, 1919, serial No. 283,673, for Process of Converting Hydrocarbons.

R. F. Whitehead,
~~*James S. Newton*~~
Acting Commissioner of Patents.

Amended July 6, 1920.

In claim 1, the expression "heated zone of reaction" found in line 3 is indefinite. Since this is a cracking process it is essential that the heated zone of reaction should be raised to a cracking temperature and this expression should be amended to indicate that such temperature is used. The expression "second reaction" in lines 6 and 7 is also indefinite as it is a cracking reaction that applicant must use. Again, the expression "residual products" in line 8 is indefinite. The specification fails to identify the products referred to. From the argument last filed one would be led to interpret this expression as meaning nothing more than carbon.

Claims 2 and 3 are indefinite as to the expressions pointed out in reference to claim 1.

In claim 4 and some of the succeeding claims, the expression "continuously passing the oil in one direction", etc. is used. This is not a distinctive characteristic; neither is it properly descriptive of applicant's process. For instance, Edwards and Trumble (both of record) each
2256 continuously passes oil in one direction. Claim 4 is too broad, as the distillates are returned to the zone of reaction previously referred to in the claim. If they were returned from a settling tank and then to some other zone of reaction, the claim would be aggregative in character.

Claims 5 to 12 are rejected as indefinite on the points referred to in the preceding claims as above noted.

The claims are all rejected on Edwards of record, who discloses pressure distillation, in connection with Smith, who discloses a complete removal of carbon from the oil returned to the zone of reaction.

E. T. Ragan,
Examiner.
28

N. W. H.

2257 Paper #7.

Patents
Trade Marks
Corporations

Telephone Central 8922
Cable Address "Franbel"

Law Offices

Frank L. Belknap

1014 First National Bank Building
Chicago

April 1st, 1921.

Hon. Commissioner of Patents
Washington, D. C.

~~*B. Singer, Esq.,*~~
~~*Nat'l Life Bldg.,*~~
~~*Chicago.*~~

Dear Sir:—

In re Universal Oil Products Company,
Case "C", (Your File No. 598)

Replying to your letter of March 29th, you are hereby authorized to withdraw from the Patent Office copies of the

Dubbs application, Serial No. 283,673, filed March 19, 1919, Process of Converting Hydrocarbons, for the purpose of making certified copy of the same to be filed in connection with foreign application.

Very truly yours,

DJT F. L. Belknap.

Approved: D. E. Wilson, April 11, 1921.

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2258

Paper No. 8.
Apr 14 1921.
Division 8.

(Stamp) Application Div. Apr 13 1921. U. S. Patent Office.

In the United States Patent Office.
Carbon P. Dubbs,
Process of Converting Hydrocarbons,
Serial No. 283,673,
Filed March 19th, 1919,
Room 169.

Hon. Commissioner of Patents,
Washington, D. C.

Sir:

Cancel claims 1 to 10 inclusive and insert:

1. A process of converting relatively heavy into lighter hydrocarbons, consisting in passing a stream of oil through a zone where the C¹ oil is heated to a cracking temperature but without substantial vaporization, passed thence to and through a zone where vaporization takes place, removing the vapors, subjecting them to reflux condensation, returning reflux condensate for further cracking, removing the residue, after said vaporization, from the system without permitting intermingling of any substantial portion thereof with the oil in the heating zone and maintaining a pressure upon the material during distillation.

2. A process of converting heavy into

lighter hydrocarbons consisting in passing in an advancing
direction a stream of oil through a zone where the oil is
heated to the cracking temperature but substantial vapor-
ization prevented and thence to and through a zone where
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2259 vaporization takes place, removing the vapors and condensing
them, returning a portion of the condensates to the
heating zone for further treatment, removing the residue
after said vaporization from the system without permitting
contact or intermingling of any substantial portion
thereof with the oil in the heating zone and maintaining
a vapor pressure upon the material under treatment
during distillation and condensation.

3. A process of converting heavy into lighter hydrocarbons consisting in passing in an advancing direction
a stream of oil through a heating zone where the oil is heat-
ed to the cracking temperature but substantial vaporization
prevented and thence to an enlarged chamber where
vaporization takes place, removing the vapors from
said chamber and condensing them and returning a
19 portion of the condensates to the heating zone for further treatment, withdrawing substantially continuously
the residue from said chamber and discharging the same
entirely apart from the feed of oil to the heating zone and maintaining a vapor pressure upon the material

under treatment during distillation and condensation.

4. A process of converting heavy into lighter hydrocarbons consisting in passing in an advancing direction
a continuous stream of oil through a heating zone where
the oil is heated to the cracking temperature but substantial vaporization prevented and thence to a chamber
where vaporization takes place, discharging from the chamber
substantially continuously a quantity of the residue proportional to the amount of oil supplied to the heating zone and

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2260 said vaporization, condensing the vapors and returning a
portion of the condensates to the stream of oil for re-treatment in the heating zone and maintaining a vapor
pressure upon the material under treatment during distillation and condensation.

5. A continuous process for cracking hydrocarbons
consisting in passing the same in a stream in an advancing
direction from an inlet point to a discharge point separated
and entirely disassociated from the inlet point, subjecting
the material in the first stage of its travel to a cracking
temperature while preventing substantial vaporization,
affording a vaporization space above the stream during the
second stage of the travel thereof to said discharge point,
taking off the vapors from said vapor space and subjecting
them to a condensing action, discharging into the stream

af a point remote from that where vaporization occurs a
portion of the condensates and maintaining a vapor pressure
on the material under treatment during distillation and
condensation.

6. A process of converting heavy into lighter hydrocarbons consisting in passing a stream of oil through
a horizontally disposed conduit located in a heating zone,
said oil substantially filling the conduit and being heated
to the cracking temperature in its passage therethrough,
passing the oil from said conduit into a second conduit
of greater diameter than the first and horizontally disposed with its bottom in substantially the horizontal
plane of the bottom of the first-named conduit whereby
a vapor space is provided above the level of the oil
wherein vaporization takes place, drawing off said vapors

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2261 and subjecting them to a condensing action, returning
a portion of the condensates to the first-named conduit,
drawing off from the second conduit the residue after
vaporization and maintaining upon the material under
treatment during distillation and condensation a substantial
pressure of the vapors generated.—

(B[1] follows)

Renumber claim 11 as 7, and in line 3, after
the word "zone" insert| where the oil is heated to the
C[2] cracking temperature but substantial vaporization prevented.

Renumber claim 12 as 8, and in line 2, erase "heated reacting zone" and insert heating zone where the oil is heated to the cracking temperature but substantial
C[3] vaporization prevented. Line 3, after "and" insert then passing the heated oil through. Line 5, after "vapors" insert from the vapor zone.

REMARKS.

The processes disclosed in the Edwards and Smith patents are radically different from that disclosed in the present application, it being sufficient to note that in each the material under treatment travels in a cyclical path, so that at least a portion of the separated carbon is returned to the cracking zone.

In Edwards, the material passes into the container 10 and thence into the header 13 through the heating tubes to the header 12 and thence by tubes 14 to the drum 8, and back by tubes 15 to the header 13 to the starting point. It is apparent that there would also be a continuous discharge of the residue through the pipe 17 from

2262 4744

the pipe 17 from the drum 8 into the drum 10.

Neither of these patents suggests passing the oil in an advancing direction from the inlet and of the heating zone through such zone into a suitable vaporizing chamber with the vapors passing from such chamber and the residue passing out of the chamber to be collected, avoiding the mixing of the precipitated carbon, or residue after vaporization, with the oil in, or to be passed through, the cracking zone.

It is understood that subject to the discovery of additional prior art, this amendment places this case in condition for allowance, and it is, therefore, asked that it be made special.

Respectfully submitted,

Carbon P. Dubbs,
By Frank L. Belknap,
Attorney.

Washington, D. C.,
April 12th, 1921.

2263 Div. 31, AMT
Address Only

The Commissioner of Patents,
Washington, D. C.

Serial No. 283,673

2—81

DEPARTMENT OF THE INTERIOR

United States Patent Office

Washington

May 4, 1921

Carbon P. Dubbs.

Sir: Your Application for a patent for an Improvement in Process of Converting Hydrocarbons filed Mar. 19, 1919, has been examined and Allowed.

The final fee, Twenty Dollars, must be paid not later than Six Months from the date of this present notice of allowance. If the final fee be not paid within that period, the patent on this application will be withheld, unless renewed with an additional fee of $15, under the provisions of Section 4897, Revised Statutes.

The office delivers patents upon the day of their date, and on which their term begins to run. The printing, photolithographing, and engrossing of the several patent parts, preparatory to final signing and sealing, will require about four weeks, and such work will not be undertaken until after payment of the necessary fee.

When you send the final fee you will also send, Distinctly And Plainly Written, the name of the Inventor, Title Of Invention, And Serial Number As Above Given, Date Of Allowance (which is the date of this circular), Date Of Filing, and, if assigned, the Names Of The Assignees.

If you desire to have the patent issue to Assignees, an assignment containing a Request to that effect, together with the Fee for recording the same, must be filed in this office on or before the date of payment of final fee.

After issue of the patent uncertified copies of the drawings and specifications may be purchased at the price of

Ten Cents Each. The money should accompany the order. Postage stamps will not be received.

Final fees will Not be received from other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

Respectfully,

T. E. Robertson,
~~*James T. Newton*~~
Commissioner of Patents.

Frank L. Belknap
1014 1st Nat'l Bank Bldg.
Chicago, Ill.

(In left-hand margin) ☞ In Remitting The Final Fee Give The Serial Number At The Head Of This Notice.

(In right-hand margin) ☞ Uncertified Checks Will Not Be Accepted.

35

2264 DEPARTMENT OF THE INTERIOR

United States Patent Office

Washington

July 2, 1921

PETITION.

Application of C. P. Dubbs
Serial No. 283673
Invention: .....

This petition is referred to Examiner in Charge of Division 31 for recommendation.

In case he recommends adversely he will state his reasons therefor and furnish a copy thereof to petitioner.

Thomas E. Robertson,
Commissioner of Patents.

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2265 (Stamps) Docket Division Jul 2 1921 U. S. Patent Office. Application Div. Jun 30 1921 U. S. Patent Office. Amendment Rule 78. Paper No. 9 Jul 1 1921 Division 31.

IN THE UNITED STATES PATENC OFFICE.

Carbon P. Dubbs,
Process of Converting Hydrocarbons,
Serial No. 283,673,
Filed March 19th, 1919,
Room 169.

June 29th, 1921.

Hon. Commissioner of Patents,
Washington, D. C.

Sir:

It is asked that the hereinafter recited claim be entered in the above entitled application without withdrawing it from issue:

9. The process for treating hydrocarbon oil by heating it to a cracking temperature and condensing the
D[1] condensible products volatilized therefrom under pressure,
consisting in raising the oil to a cracking temperature
without substantial vaporization in a heating
zone, passing the heated oil to a second zone where vapor-
ization occurs, removing the vapors and subjecting them to
condensation, subjecting a portion of the condensate to
further cracking, taking off the carbon containing resid-
uum from the second zone without permitting access of any
substantial portion thereof to the heating zone, and main-
taining a pressure upon the materials under treatment, sub-
stantially as described.

(Sig.)

REMARKS.

In reconsidering this application, preparatory to the payment of the final fee, applicant thought that he was entitled to state his invention somewhat more broadly than
37
2266 it is stated in the claims which have been allowed, for the purpose of making clear that a paramount novel feature of the process is the heating of the oil in one zone without substantial vaporization occurring, then vaporizing of the oil in a second zone, and the taking off of the residuum without the intermixing of any substantial part of the residuum with the oil undergoing treatment in the heating zone, or with the materials which are to be passed through or subjected to the heating zone.

Respectfully submitted,

Carbon P. Dubbs,
By William & Hall,
Attorneys.

I recommend that the foregoing claim be entered in the application without withdrawing it from issue.

W. W. Holmes,
Exr. Div. 31.

Approved Jul 11 1921:
Thomas E. Robertson,
Commissioner of Patents.

38

2267 Letter No. 10

Address Only
The Commissioner of Patents
Washington, D. C.

EEG

DEPARTMENT OF THE INTERIOR

United States Patent Office

Washington

July 12, 1921.

In the matter of the
Application of
Carbon P. Dubbs
Process of Converting
Hydrocarbons;
Filed March 19, 1919
Serial No. 283,673. } Amendment.

Sir:

You are hereby informed that the recommendation of the examiner that the amendment be admitted under the provisions of Rule 78, has been approved by the Commissioner and the amendment entered.

By direction of the Commissioner:

Very respectfully,

Wm. J. Wyman,
Chief Clerk.

F.

Carbon P. Dubbs
c/o Frank L. Belknap
1014 First National Bank Bldg.
Chicago, Ill.

2268 (Form of Western Union Telegram.)

S. W. Cor. 7th & F Sts. N. W.
Franklin 7100, Branch 46

(Stamp) Mail Room Sep 7 1921 U. S. Patent Office.

Received at
105W NR 20
FK Chicago Ills 1126A Sept 7 1921
Spear Middleton Donaldson and Small
Victor Bldg Washington DC
Please Pay Final Fee Today Dubbs Two Eight Three Six Seven Three Filed March Nineteenth Nineteen Nineteen Wire When Paid

F L Belknap
1254P
40

2269 (Stamp) 20.— Rec'd Sep 7 1921 U. S. Pat. Office.
2—327

MEMORANDUM OF FEE PAID AT UNITED STATES PATENT OFFICE.

(Be careful to give correct Serial No.)

Serial No. 283673 ....., 19.....

Inventor:
Dubbs

Patent To Be Issued To

.....

Name Of Invention, As Allowed:

.....

Date Of Payment:
September 7, 1921

Fee:
$20—

Date Of Filing:
March 19, 1919

Date Of Circular Of Allowance:

.....

The Commissioner of Patents will please apply the accompanying fee as indicated above.

Spear, Middleton, Donaldson & Hall,
Attorneys.

Send Patent To
Mr. F. L. Belknap,
First Nat'l. Bank Bldg.,
Chicago, Ill.

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2270 #11

(Stamps) Docket Division Sep 28 1921 U. S. Patent Office. Mail Room Sep 28 1921 U. S. Patent Office.

IN THE UNITED STATES PATENT OFFICE.

In application of
Carbon P. Dubbs,
Ser. No. 283, 673,
Filed March 19, 1919.
Allowed May 4th, 1921
Final fee paid
Sept. 7th, 1921.

} Process of Converting Hydrocarbons.

Chicago, Illinois,
September 26th, 1921

AMENDMENT UNDER RULE 78.

Hon. Commissioner of Patents,
Washington, D. C.

Sir:

It is respectfully that the following typographical errors be corrected in the above-entitled application:—

Page 1, line 23, "refluxing" should be—refluxed; line 26, "secondard" should be—secondary, and line 27, "noval" should be—novel.

Respectfully submitted,
F. L. Belknap.

(Marginal notation) Too late for amendment. Printed. W. W. M. Sept. 30, 1921.

42

2271 Letter No. 12

Address Only
The Commissioner of Patents
Washington, D. C.

EEG

DEPARTMENT OF THE INTERIOR

United States Patent Office

Washington

September 30, 1921.
In the matter of the
Application of
Carbon P. Dubbs
Process of Converting
Hydrocarbons;
Filed March 19, 1919
Serial No. 283,673.

Sir:

Referring to the amendment filed by you under date of the 28th instant, you are advised that the Chief of the Issue Division reports that the amendment was filed too late to be incorporated in the case.

Very respectfully,

Wm. J. Wyman,
Chief Clerk.

F.
43

Frank L. Belknap,
1014 First National Bank Bldg.
Chicago, Ill.

2272 (Copy sent patentee)

Forwarded from 31st Div. to Examiner of Interferences. Paper No. 13 [Interference.]

(Stamps) Apr 18 1923. U. S. Patent Office Jun 8 1923 Mailed.

DEPARTMENT OF THE INTERIOR,

United States Patent Office,

Washington, D. C.

CSD-AMT

Frank L. Belknap
1014 First Nat'l Bank Bldg.
Chicago, Ill.

Please find below a copy of a communication from the Examiner concerning the patent No. 1,392,629, granted Oct. 4, 1921, to Carbon P. Dubbs, on an application filed Mar. 19, 1919, serial No. 283,673, for Process of Converting Hydrocarbons.

Very respectfully,
Thomas E. Robertson,
Commissioner of Patents.

Room No. 169
Address Only
The Commissioner of Patents
Washington, D. C.

The case, above referred to, is adjudged to interfere with others, hereafter specified, and the question of priority will be determined in conformity with the Rules.

The statement demanded by Rule 110 must be sealed up and filed on or before Jul 16 1923, with the subject of the invention, and name of party filing it, indorsed on the envelope. The subject-matter involved in the interference is

Count 1.

A process of converting relatively heavy into lighter hydrocarbons, consisting in passing a stream of oil through a zone where the oil is heated to a cracking temperature but without substantial vaporization, passed thence to and through a zone where vaporization takes place, removing the vapors, subjecting them to reflux condensation, returning reflux condensate for further cracking, removing the residue after said vaporization, from the system without permitting intermingling of any substantial portion thereof with the oil in the heating zone and maintaining a pressure upon the material during distillation.

Count 2.

A process of converting heavy into lighter hydrocarbons consisting in passing in an advancing direction a stream of oil through a zone where the oil is heated to the cracking temperature but substantial vaporization prevented and thence to and through a zone where vaporization takes place, removing the vapors and condensing them, returning a portion of the condensates to the heating zone for further treatment, removing the residue after said vaporization from the system without permitting contact or intermingling of any substantial portion thereof with the oil in the heating zone and maintaining a vapor pressure upon the material under treatment during distillation and condensation.

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2273 Count 3.

A process of converting heavy into lighter hydrocarbons, consisting in passing in an advancing direction a stream of oil through a heating zone where the oil is heated to the cracking temperature but substantial vaporization prevented and thence to an enlarged chamber where vaporization takes place, removing the vapors from said chamber and condensing them and returning a portion of the condensates to the heating zone for further treatment, withdrawing substantially continuously the residue from said chamber and discharging the same entirely apart from the feed of oil to the heating zone and maintaining a vapor pressure upon the material under treatment during distillation and condensation.

Count 4.

A process of converting heavy into lighter hydrocarbons consisting in passing in an advancing direction a continuous stream of oil through a heating zone where the oil is heated to the cracking temperature but substantial vaporization prevented and thence to a chamber where vaporization takes place, discharging from the chamber substantially continuously a quantity of the residue proportional to the amount of oil supplied to the heating zone and said vaporization, condensing the vapors and returning a portion of the condensates to the stream of oil for retreatment in the heating zone and maintaining a vapor pressure upon the material under treatment during distillation and condensation.

Count 5.

A continuous process for cracking hydrocarbons consisting in passing the same in a stream in an advancing direction from an inlet point to a discharge point separated and entirely disassociated from the inlet point, subjecting the material in the first stage of its travel to a cracking temperature while preventing substantial vaporization, affording a vaporization space above the stream during the second stage of the travel thereof to said discharge point, taking off the vapors from said vapor space and subjecting them to a condensing action, discharging into the stream at a point remote from that where vaporization occurs a portion of the condensates and maintaining a vapor pressure on the material under treatment during distillation and condensation.

Count 6.

A process of cracking oil consisting in continuously passing a stream of oil through a series of tubes seated in a cracking zone where the oil is heated to the cracking temperature but substantial vaporization prevented, and thence to an enlarged vapor chamber where vaporization takes place, removing the vapors from said chamber, subjecting them to an initial condenser where a portion of the vapors are condensed, subjecting the uncondensed portion of the vapors to a final condensation, returning the condensate from said initial condensation to the inlet side of the cracking tubes and continuously drawing off the residue from the vapor chamber and preventing it from returning to the cracking zone and maintaining a pressure on the oil during treatment.

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2274 Count 7.

A process of cracking oil consisting in progressively passing the oil through a heating zone where the oil is heated to the cracking temperature but substantial vaporization prevented and then passing the heated oil through a vaporizing zone, forcing the carbon containing residue out of the system and preventing it from coming in contact with the incoming charging stock taking off vapors from the vapor zone and condensing them and returning condensate therefrom to and mixing it with the fresh charging stock which is being passed through said zone.

Count 8.

The process for treating hydrocarbon oil by heating it to a cracking temperature and condensing the condensable products volatilized therefrom under pressure, consisting in raising the oil to a cracking temperature without substantial vaporization in a heating zone, passing the heated oil to a second zone where vaporization occurs, removing the vapors and subjecting them to condensation, subjecting a portion of the condensate to further cracking, taking off the carbon containing residuum from the second zone without permitting access of any substantial portion thereof to the heating zone and maintaining a pressure upon the materials under treatment, substantially as described.

The interference involves your patent above identified, and

An application for Process for Making Gasoline, filed by Ralph C. Holmes, Frederick T. Manley and Otto Behimer, whose respective post-office addresses are: c/o Texas Company, 17 Battery Place, New York, N. Y.; Houston, Texas; and Port Arthur, Texas, whose attorney is Mr. R. J. Dearborn, 17 Battery Place, New York, N. Y., and whose assignee is The Texas Company, at above address.

The relation of the counts of the interference to the claims of the respective parties is as follows:

Counts	Dubbs	Holmes et al.
1	1	25
2	2	26
3	3	27
4	3 4	28
5	5	29
6	7	30
7	8	31
8	9	32

Wellington B. Johnson,
Actg. Examiner, Div. 31.

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(Counts compared)

2275 INTERFERENCE.

CSD-AMT

Interference No. 49355 Paper No. 14
Name, Carbon P. Dubbs
Serial No. 283673 Pat. 1,392,629
Title, Process of Converting Hydrocarbons
Filed, Mar. 19, 1919
Interference with Holmes et al.

Decisions Of

Primary Examiner, ...	Dated, ...
Ex'r of Interferences, Favorable	Dated, Dec. 5/31
Board, ...	Dated, ...
Commissioner	Dated, ...

Remarks:

.....

.....

This should be placed in each application or patent involved in interference in addition to the interference letters by Primary Examiner.

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2276-2279 United States Patent No. 1,392,629 See index

2280 #15

UNITED STATES DISTRICT COURT,

District of Maine,

Southern Division.

(Stamp) Mail Room Oct 6 1925 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. .....), you are advised that there was filed on the 6th

day of October, 1925, in this court an action, suit, or proceeding No. 883 Equity, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois, Corporation under laws of So. Dakota

versus

Name Empire Refineries, Inc., Defendant,
Address Portland, Maine, Corporation under laws of Maine
brought upon the following patents:

	Patent No.	Date of Patent	Inventor	Patent Granted
1	1123502	January 5, 1915	Jesse A. Dubbs	Plaintiff
2	1392629	October 4, 1921	Carbon P. Dubbs	
3	1484445	February 19, 1924	Same	"
4	1488325	March 25, 1924	Same	"
5	1525281	February 3, 1925	Same	"
	1517830	December 2, 1924	Gustav Egloff & Harry P. Benner	
	1546634	July 25, 1925	Carbon P. Dubbs	"

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 6th day of October, 1925, at Portland, Maine.

John T. Knowlton,
Clerk of said Court.

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2281 #16

UNITED STATES DISTRICT COURT,

Southern District of New York.

(Stamp) Mail Room Jan 30 1926 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. .....), you are advised that there was filed on the 27th day of January, 1926, in this court an action, suit, or proceeding No. L35-197, entitled:

Name Universal Oil Products Co., Plaintiff,
Address Chicago, Ill.

versus

Name Gasoline Products Co. & The M. W. Kellogg Co., Defendant,
Address N. Y. N. Y.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1392629	Oct. 4, 1921	Universal Oil Products Co.
2	1484445	Feb. 19, 1924	Universal Oil Products Co.
3	1488325	Mar. 25, 1924	Universal Oil Products Co.
4	1522425	Jan. 6, 1925	Universal Oil Products Co.
5	1517830	Dec. 2, 1924	Universal Oil Products Co.
6	1525281	Feb. 3, 1925	Universal Oil Products Co.
7	1534927	Apr. 21, 1925	Universal Oil Products Co.
8	1537593	May 28, 1925	Universal Oil Products Co.
9	1535725	Apr. 28, 1925	Universal Oil Products Co.
10	1546634	July 21, 1925	Universal Oil Products Co.
11	1550568	Aug. 18, 1925	Universal Oil Products Co.
12	1535724	Apr. 28, 1925	Universal Oil Products Co.

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed by hand this 28th day of January, 1926, at N. Y. N. Y.

Alex Gilchrist, Jr.,
Clerk of said Court.
.49

2282 #17

UNITED STATES DISTRICT COURT,

Northern District of Illinois.

(Stamp) Mail Room Apr 8 1926 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L.), you are advised that there was filed on the 26th day of January, 1926, in this court an action, suit, or proceeding No. 5660, entitled:

Name Universal Oil Products Co., Plaintiff,
Address Chicago, Illinois.

versus

Name Texas Company, Defendant,
Address Lockport, Illinois.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3	1,440,772	Jan. 2, 1923	Carbon P. Dubbs
4	1,484,445	Feb. 19, 1924	Carbon P. Dubbs
5	1,488,325	Mar. 25, 1924	Carbon P. Dubbs
6	1,522,425	Jan. 6, 1925	Carbon P. Dubbs
7	1,525,281	Feb. 3, 1925	Carbon P. Dubbs
8	1,517,830	Dec. 2, 1924	Gustav Egloff and Harry P. Benner
9	1,546,634	July 21, 1925	Carbon P. Dubbs
10	1,550,607	Aug. 18, 1925	Carbon P. Dubbs
11	1,568,400	Jan. 5, 1926	Carbon P. Dubbs
12	1,550,568	Aug. 18, 1925	Robert T. Pollock

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 20th day of February, 1926, at Chicago, Illinois.

Charles M. Bates,
Clerk of said Court.

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2283 #18

UNITED STATES DISTRICT COURT,

District of Texas, Northern.

(Stamp) Mail Room Apr 16 1926 U. S. Patent Office

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. .....), your are advised that there was filed on the 28th day of January, 1926, in this court an action, suit, or proceeding No. 472—Equity, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Ill.

versus

Name Gulf Refinery Company, Defendant,
Address Fort Worth, Texas.

brought upon the following patents:

1. No. 1,281,884, issued Oct. 15, 1918, on invention of Milton J. Trumble, now owned by Universal Oil Products Co.
2. No. 1,392,629, granted Oct. 4, 1921, to Carbon P. Dubbs, now owned by Universal Oil Products Co.
3. No. 1,484,445, granted Feb. 19, 1924, to Universal Oil Products Co. on invention of Carbon P. Dubbs.
4. No. 1,488,325, granted Mar. 25, 1924, to Universal Oil Products Co. on invention of Carbon P. Dubbs.
5. No. 1,517,830, granted Dec. 2, 1924, to Universal Oil Products Co. on invention of Gustav Egloff and Harry P. Benner.
6. No. 1,525,281, granted Feb. 3, 1925, to Universal Oil Products Co. on invention of Carbon P. Dubbs.
7. No. 1,534,927, granted Apr. 21, 1925, to Universal Oil Products Co. on invention of Carbon P. Dubbs.
8. No. 1,546,634, granted July 21, 1925, to Universal Oil Products Co. on invention of Carbon P. Dubbs.
9. No. 1,543,831, granted June 30, 1925, to Universal Oil Products Co. on invention of Carbon P. Dubbs.
10. No. 1,543,832, granted June 30, 1925, to Universal Oil Products Co. on invention of Carbon P. Dubbs.
11. No. 1,568,400, granted Jan. 5, 1926, to Universal Oil Products Co. on invention of Carbon P. Dubbs.

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 13th day of April, 1926, at Fort Worth, Texas.

Geo. W. Parker,
Clerk of said Court.
W. W. Burke,
Deputy.

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2284 #19

UNITED STATES DISTRICT COURT,

District of Delaware.

(Stamp) Mail Room Jun 26 1926 U. S. Patent Office

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. .....), you are advised that there was filed on the 11th day of June, 1926, in this court an action, suit, or proceeding No. 608 In Equity, entitled:

Name Universal Oil Products Company, a corporation of the State of South Dakota, Plaintiff,
Address Chicago, Cook County, Illinois

versus

Name Skelly Oil Company, a corporation of the State of Delaware, Defendant,
Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,484,445	Feb. 19, 1924	Carbon P. Dubbs
3	1,488,325	Mar. 25, 1924	Carbon P. Dubbs
4	1,517,830	Dec. 2, 1924	Gustav Egloff and Harry P. Benner
5	1,522,425	Jan. 6, 1925	Carbon P. Dubbs
6	1,534,927	Apr. 21, 1925	Carbon P. Dubbs
7	1,525,281	Feb. 3, 1925	Carbon P. Dubbs
8	1,550,568	Aug. 18, 1925	Robert T. Pollock
9	1,550,607	Aug. 18, 1925	Carbon P. Dubbs
10	1,551,090	Aug. 25, 1925	Carbon P. Dubbs
11	1,378,307	May 17, 1921	William Herbert Young

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this twenty-eighth day of June, 1926, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

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2285 #20

Form 1. Notice as to Patents.

Commencement of Action.

(Stamp) Mail Room Sep 22 1926 U. S. Patent Office

United States District Court;
District of Indiana,
Hammond Division.

Universal Oil Products Co.,
vs.
Standard Oil Company, (Indiana). } No. 33—Equity.

To the Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922, notice is hereby given as to the above entitled action:

1. The action was commenced: January 28, 1926.
2. The names and address of the litigants are:
   Universal Oil Products Co., Chicago, Illinois.
   Standard Oil Company, Whiting, Indiana.
3. The action includes patents having following designating number, date and inventors.

Patent Nos.	Dates of Patents.	Inventor
1,123,502	January 5, 1915	Jesse A. Dubbs.
1,392,629	October 4, 1921	Carbon P. Dubbs.
1,440,772	January 2, 1923	Carbon P. Dubbs.
1,484,445	February 19, 1924	Carbon P. Dubbs.
1,488,325	March 25, 1924	Carbon P. Dubbs.
1,522,425	January 6, 1925	Carbon P. Dubbs.
1,517,830	December 2, 1924	Gustav Egloff.
1,525,281	February 3, 1925	Carbon P. Dubbs.
1,546,634	July 21, 1925	Harry P. Benner.
1,550,607	August 18, 1925	Carbon P. Dubbs.
1,568,400	January 5, 1926	Carbon P. Dubbs.

Dated: August 26th, 1926.

Respectfully,
William P. Kappes,
Clerk.
By Maude B. Swank,
Deputy Clerk.

2286 #21

DISTRICT COURT OF THE UNITED STATES,

Southern District of New York.

(Stamp) Mail Room Sep 2 1927 U. S. Patent Office

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 1st day of September, 1926, in this court an action, suit, or proceeding No. Eq. 43-56, entitled:

Name Universal Oil Products Co., Plaintiff,
Address Chicago, Ill.

versus

Name Standard Oil Company of New York, Defendant,
Address New York, N. Y.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
		See other side	
1			
2			
3			
4			
5			

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
		over	
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 1st day of August, 1927, at New York, N. Y.

Alex Gilchrist, Jr.,
Clerk of said Court.

54

2287. Patent

Nos.	Date	Patentee
1,392,629	Oct. 4, 1921	Carbon P. Dubbs
1,484,445	Feb. 19, 1924	Carbon P. Dubbs
1,488,325	Mar. 25, 1924	Carbon P. Dubbs
1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
1,522,425	Jan. 6, 1925	Carbon P. Dubbs
1,534,927	April 21, 1925	Carbon P. Dubbs
1,525,281	Feb. 3, 1925	Carbon P. Dubbs
1,550,568	Aug. 18, 1925	Carbon P. Dubbs
1,550,607	Aug. 18, 1925	Carbon P. Dubbs
1,551,090	Aug. 25, 1925	Carbon P. Dubbs
1,378,307	May 17, 1921	William Herbert Young
1,546,634	July 21, 1925	Carbon P. Dubbs
1,628,270	May 10, 1927	Robert T. Pollack

55

2288 #22

District Court of the United States,

District of Delaware.

(Stamp) Mail Room Sep 15 1927 U. S. Patent Office

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 2nd day of August, 1927, in this court an action, suit, or proceeding No. 655 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois.

versus

Name Crown Central Petroleum Corporation, a corporation of Delaware, Defendant,
Address Wilmington, Delaware.

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,440,772	Jan. 2, 1923	do.
4.	1,484,445	Feb. 19, 1924	do.
5.	1,488,325	Mar. 25, 1924	do.
4.	1,522,425	Jan. 6, 1925	do.
7.	1,525,281	Feb. 3, 1925	do.
8.	1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
10.	1,550,607	Aug. 18, 1925	do.
11.	1,568,400	Jan. 5, 1926	do.
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
13.	1,592,560	July 13, 1926	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this fourteenth day of September, 1927, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2289 #22(A)

DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Sep 15 1927 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 2nd day of August, 1927, in this court an action, suit, or proceeding No. 655 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Crown Central Petroleum Corporation, a corporation of Delaware, Defendant,
Address Wilmington, Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,440,772	Jan. 2, 1923	do.
4.	1,484,445	Feb. 19, 1924	do.
5.	1,488,325	Mar. 25, 1924	do.
6.	1,522,425	Jan. 6, 1925	do.
7.	1,525,281	Feb. 3, 1925	do.
8.	1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
10.	1,550,607	Aug. 18, 1925	do.
11.	1,568,400	Jan. 5, 1926	do.
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
13.	1,592,560	July 13, 1926	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed my hand this fourteenth day of September, 1927, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2290 #23

DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Sep 15 1927 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 2nd day of August, 1927, in this court an action, suit, or proceeding No. 656 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Lincoln Oil Refining Company, a corporation of Delaware, Defendant,
Address Wilmington, Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,440,772	Jan. 2, 1923	do.
4.	1,484,445	Feb. 19, 1924	do.
5.	1,488,325	Mar. 25, 1924	do.
6.	1,552,425	Jan. 6, 1925	do.
7.	1,525,281	Feb. 3, 1925	do.
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
8.	1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
10.	1,550,607	Aug. 18, 1925	Carbon P. Dubbs
11.	1,568,400	Jan. 5, 1926	do.
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
13.	1,592,560	July 13, 1926	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed my hand this fourteenth day of September, 1927, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2291 #23(A)

DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Sep 15 1927 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 2nd day of August, 1927, in this court an action, suit, or proceeding No. 656 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Lincoln Oil Refining Company, a corporation of Delaware, Defendant,
Address Wilmington, Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,440,772	Jan. 2, 1923	do.
4.	1,484,445	Feb. 19, 1924	do.
5.	1,488,325	Mar. 25, 1924	do.
6.	1,522,425	Jan. 6, 1925	do.
7.	1,525,281	Feb. 3, 1925	do.
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
8.	1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
10.	1,550,607	Aug. 18, 1925	Carbon P. Dubbs
11.	1,568,400	Jan. 5, 1926	do.
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
13.	1,592,560	July 13, 1926	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this fourteenth day of September, 1927, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2292 #24

DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Sep 15 1927 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 2nd day of August, 1927, in this court an action, suit, or proceeding No. 657 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name White Eagle Oil & Refining Company, a corporation, of Delaware, Defendant,
Address Wilmington, Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	7,440,772	Jan. 2, 1923	do.
4.	1,484,445	Feb. 19, 1924	do.
5.	1,488,325	Mar. 25, 1924	do.
6.	1,522,425	Jan. 6, 1925	do.
7.	1,525,281	Feb. 3, 1925	do.
8.	1,517,830	Dec. 2, 1924	Gustav & Harry P. Benner
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
10.	1,550,607	Aug. 18, 1925	do.
11.	1,568,400	Jan. 5, 1926	do.
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
13.	1,592,560	July 13, 1926	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

.....

In Witness Whereof I have affixed my hand this fourteenth day of September, 1927, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2293 #24(A)

DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Sep 15 1927 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 2nd day of August, 1927, in this court an action, suit, or proceeding No. 657 in Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name White Eagle Oil & Refining Company, a corporation of Delaware, Defendant,
Address Wilmington, Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,440,772	Jan. 2, 1923	do.
4.	1,484,445	Feb. 19, 1924	do.
5.	1,488,325	Mar. 25, 1924	do.
6.	1,522,425	Jan. 6, 1925	do.
7.	1,525,281	Feb. 3, 1925	do.
8.	1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
10.	1,550,607	Aug. 18, 1925	do.
11.	1,568,400	Jan. 5, 1926	do.
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
13.	1,592,560	July 13, 1926	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this fourteenth day of September, 1927, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2294 #25

DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Sep 15 1927 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 4th day of August, 1927, in this court an action, suit, or proceeding No. 658 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Mid-Continent Petroleum Corporation, a corporation of Delaware, Defendant,
Address Wimington, Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,281,884	Oct. 15, 1918	Milton J. Trumble
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,488,325	Mar. 25, 1924	do.
4.	1,525,281	Feb. 3, 1925	do.
5.	1,546,634	July 21, 1925	do.

In the above-entitled case, on the ..... day of ....., 192..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed by hand this fourteenth day of September, 1927, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

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2295 #26

DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Sep 15 1927 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 4th day of August, 1927, in this court an action, suit, or proceeding No. 658 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Mid-Continent Petroleum Corporation, a corporation of Delaware, Defendant,
Address Wilmington, Delaware,

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,281,884	Oct. 15, 1918	Milon J. Trumble
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,488,325	Mar. 25, 1924	"
4.	1,525,281	Feb. 3, 1925	"
5.	1,546,634	July 21, 1925	"

In the above-entitled case, on the 25th day of January, 1928, the following patents have been included by counterclaim (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1.	1,355,312	Oct. 12, 1920	John W. Coast, Jr.
2.			
3.			
4.			
5.			

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this twenty-first day of April, 1928, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

63

2296 #27

(Stamp) Mail Room Jan 3 1929 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 11th day of June, 1926, in this court an action, suit, or proceeding No. 608 In Equity, entitled:

Name Universal Oil Products Company, Plaintiff,
a corporation of South Dakota,
Address Chicago, Illinois,

versus

Name Skelly Oil Company, Defendant,
a corporation of the State of Delaware.
Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,484,445	Feb. 19, 1924	"
3	1,488,325	Mar. 25, 1924	"
4	1,517,830	Dec. 2, 1924	Gustav Egloff and Harry P. Benner
5	1,522,425	Jan. 6, 1925	Carbon P. Dubbs
6	1,534,927	Apr. 21, 1925	Carbon P. Dubbs
7	1,525,281	Feb. 3, 1925	"
8	1,550,568	Aug. 18, 1925	Robert T. Pollock
9	1,550,607	Aug. 18, 1925	Carbon P. Dubbs
10	1,551,090	Aug. 25, 1925	"
11	1,378,307	May 17, 1921	William Herbert Young

In the above-entitled case the following decision has been rendered or decree issued: December 28, 1928. Final decree (upon stipulation) dismissing bill of complaint.

In Witness Whereof I have affixed my hand this thirty-first day of December, 1928, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

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2297 #28

(Stamp) Mail Room Mar 7 1929 U. S. Patent Office.

UNITED STATES DISTRICT COURT

Northern District of Texas,

Fort Worth, Texas.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. ....), you are advised that there was filed on the 28th day of Jan., 1926, in this court an action, suit, or proceeding No. 472 Equity entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Ill.

versus

Name Gulf Refining Company, Defendant,
Address Fort Worth, Texas.
brought upon the following patents:

Patent No.	Date of Patent	Patentee
1,281,884	Oct. 15, 1918	Milton J. Trumble
1,392,629	" 4, 1921	Carbon P. Dubbs
1,484,445	Feb. 19, 1924	" "
1,488,325	Mch. 25, 1924	" "
1,517,830	Dec. 2, 1924	Gustav Egloff & Harry Benner
1,525,281	Feb. 3, 1925	Carbon P. Dubbs
1,534,927	Apl 21, 1925	" "
1,546,634	July 21, 1925	" "
1,543,831	June 30, 1925	" "
1,543,832	June 30, 1925	" "
1,568,400	Jan. 5, 1926	" "

In the above-entitled case the following decision has been rendered or decree issued: March 4th, 1929. Dismissed at cost of complainant.

In witness whereof I have affixed my hand this 4th day of March, 1929, at Fort Worth, Texas.

Geo. W. Parker,
Clerk of said Court.
By G. B. Buckley,
Deputy.

65

2298 #29

(Stamp) Mail Room Apr 21 1930 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the eleventh day of April, 1930, in this court an action, suit, or proceeding No. 783 In Equity, entitled:

Name Universal Oil Products Company, Plaintiff,
a corporation of South Dakota,
Address Chicago, Illinois,

versus

Name Standard Oil Company of New Jersey, Defendant,
a corporation of Delaware,
Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,281,884	Oct. 15, 1918	Milon J. Trumble
3.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
4.	1,488,325	Mar. 25, 1924	do.
5.	1,522,425	Jan. 6, 1925	"
6.	1,525,281	Feb. 3, 1925	"
7.	1,534,927	Apr. 21, 1925	"
8.	1,546,634	July 21, 1925	"
9.	1,549,352	Aug. 11, 1925	Carbon P. Dubbs
10.	1,550,568	Aug. 18, 1925	Robert T. Pollock
11.	1,550,607	Aug. 18, 1925	Carbon P. Dubbs
12.	1,628,270	May 10, 1927	Robert T. Pollock
13.	1,638,735	Aug. 9, 1927	Lyman C. Huff
14.	1,686,654	Oct. 9, 1928	Carbon P. Dubbs
15.	1,703,100	Feb. 26, 1929	do.

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this nineteenth day of April, 1930, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2299 #30

(Stamp) Mail Room June 20, 1930 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

Eastern District of Pennsylvania.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 3rd day of June, 1930, in this court an action, suit, or proceeding No. 6045, entitled:

Name Universal Oil Products Company, *Plaintiff*,
Address Chicago, Illinois

versus

Name Gulf Refining Company, Defendant,
Address Philadelphia, Penna.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,281,884	Oct. 15, 1928	Shell Co. of California, assignee of Milon J. Trumble
2	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3	1,484,445	Feby. 19, 1924	Universal Oil Products Co.
	1,488,325	Mch. 25, 1924	Universal Oil Products Co.
	1,525,281	Feby. 3, 1925	Universal Oil Products Co.
	1,534,927	Apr. 21, 1925	Universal Oil Products Co.
	1,543,833	June 30, 1925	Universal Oil Products Co.
	1,546,634	July 21, 1925	Universal Oil Products Co.
	1,551,090	Aug. 25, 1925	Universal Oil Products Co.
	1,600,721	Sept. 21, 1926	Universal Oil Products Co.
	1,682,744	Sept. 4, 1928	Universal Oil Products Co.
	1,690,997	Nov. 6, 1928	Universal Oil Products Co.

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed my hand this fourteenth day of June, 1930, at Philadelphia, Penna.

George Brodbeck,
Clerk of said Court.
By: Signature Illegible
Deputy Clerk.
67

2300 #31

(Stamp) Mail Room Feb. 18, 1931 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the second day of August, 1927, in this court an action, suit, or proceeding No. 655 In Equity, entitled:

Name Universal Oil Products Company, Plaintiff,
a corporation of South Dakota,
Address Chicago, Illinois,
versus
Name Crown Central Petroleum Corporation, Defendant,
a corporation of Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,440,772	Jan. 2, 1923	do.
4.	1,484,445	Feb. 19, 1924	"
5.	1,488,325	Mar. 25, 1924	"
6.	1,522,425	Jan. 6, 1925	"
7.	1,525,281	Feb. 3, 1925	"
8.	1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
10.	1,550,607	Aug. 18, 1925	do.
11.	1,568,400	Jan. 5, 1926	"
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
13.	1,592,560	July 13, 1926	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

February 16, 1931. Final consent decree dismissing bill of complaint.

In Witness Whereof I have affixed my hand this seventeenth day of February, 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

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2301 #32

(Stamp) Mail Room Feb. 18, 1931 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the second day of August, 1927, in this court an action, suit, or proceeding No. 656 In Equity, entitled:

Name Universal Oil Products Company, Plaintiff,
a corporation of South Dakota,
Address Chicago, Illinois.

versus

Name Lincoln Oil Refining Company, Defendant,
a corporation of Delaware,
Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,440,772	Jan. 2, 1923	do.
4.	1,484,445	Feb. 19, 1924	"
5.	1,488,325	Mar. 25, 1924	"
6.	1,522,425	Jan. 6, 1925	"
7.	1,525,281	Feb. 3, 1925	"
8.	1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
10.	1,550,607	Aug. 18, 1925	do.
11.	1,568,400	Jan. 5, 1926	"
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
13.	1,592,560	July 13, 1926	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

February 16, 1931. Final consent decree dismissing bill of complaint.

In Witness Whereof I have affixed my hand this seventeenth day of February, 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

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2302. #33

(Stamp) Mail Room Feb. 18, 1931 U. S. Patent Office.

District Court of the United States

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the second day of August, 1927, in this court an action, suit, or proceeding No. 657 In Equity, entitled:

Name Universal Oil Products Company, Plaintiff,
a corporation of South Dakota,
Address Chicago, Illinois,

versus

Name White Eagle Oil & Refining Company, Defendant,
a corporation of Delaware,
Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3.	1,440,772	Jan. 2, 1923	do.
4.	1,484,445	Feb. 19, 1924	"
5.	1,488,325	Mar. 25, 1924	"
6.	1,522,425	Jan. 6, 1925	"
7.	1,525,281	Feb. 3, 1925	"
8.	1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
10.	1,550,607	Aug. 18, 1925	do.
11.	1,568,400	Jan. 5, 1926	"
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
13.	1,592,560	July 13, 1926	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

February 16, 1931. Final consent decree dismissing bill of complaint.

In Witness Whereof I have affixed my hand this seventeenth day of February, 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

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2303 #34

(Stamp) Mail Room Feb 19 1931 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

Southern District of New York.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 1st day of September, 1927, in this court, an action, suit, or proceeding No. E 43-56, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Ill.,

versus

Name Standard Oil Company of New York, Defendant,
Address New York, N. Y.,
brought upon the following patents:

Patent No.	Date of Patent	Patentee
1,392,629		
1,484,445		
1,488,325		
1,517,830		
1,522,425		
1,534,927		
1,525,281	See reverse side	
1,550,568		
1,550,607		
1,551,090		
1,378,307		
1,546,634		
1,628,270		

In the above-entitled case, on the _____ day of _____, 192__, the following patents have been included by _____ (insert amendment, answer, cross bill, or other pleading):

In the above-entitled case the following decision has been rendered or decree issued:

Feb. 17, 1931. Filed Final decree dismissing Bill without costs (settled). Bondy, J.

In Witness Whereof I have affixed my hand this 17th day of February, 1931, at New York, N. Y.

Charles Weiser,
Clerk of said Court.

See other side for patents.

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2304 See other side.

Pat. No.	Date	Patentee
1,392,629	Oct. 4, 1921	Carbon P. Dubbs
1,484,445	Feb. 19, 1924	"
1,448,325	Mar. 25, 1924	"
1,517,830	Dec. 2, 1924	Gustav Egloff & Harry P. Benner
1,522,425	Jan. 6, 1925	Carbon P. Dubbs
1,534,927	Apr. 21, 1925	"
1,525,281	Feb. 3, 1925	"
1,550,568	Aug. 18, 1925	"
1,550,607	Aug. 18, 1925	"
1,551,090	Aug. 25, 1925	"
1,378,307	May 17, 1921	Wm. Herbert Young
1,546,634	July 21, 1925	Carbon P. Dubbs
1,628,270	May 10, 1927	Robert T. Pollock

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2305 #35

(Stamp) Mail Room Feb 19 1921 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

Southern District of New York.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 7th day of January, 1926, in this court an action, suit, or proceeding No. E 35-197, entitled:
Name Universal Oil Products Co., Plaintiff,
Address Chicago, Ill,

versus

Name Gasoline Products Co. & The M. W. Kellogg Co., Defendants,
Address New York, N. Y.,
brought upon the following patents:

Patent No.	Date of Patent	Patentee
1,392,629		
1,484,445		
1,488,325		
1,522,425		
1,517,830		
1,525,281	See reverse side	
1,534,927		
1,537,593		
1,535,725		
1,546,634		
1,550,568		
1,535,724		

In the above-entitled case, on the ..... day of ....., 192 , the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

In the above-entitled case the following decision has been rendered or decree issued:

Feb. 17, 1931. Filed Final decree dismissing Bill without cost. Bondy, J.

In Witness Whereof I have affixed my hand this 17th day of February, 1931, at New York, N. Y.

Charles Weiser,
Clerk of said Court.

See other side for patents.

73

2306 See other side

Pat. No.	Date	Patentee
1,392,629	Oct. 4, 1921	Plaintiff
1,484,445	Feb. 19, 1924	"
1,488,325	Mar. 25, 1924	"
1,522,425	Jan. 6, 1925	"
1,517,830	Dec. 2, 1924	"
1,525,281	Feb. 3, 1925	"
1,534,927	Apr. 21, 1925	"
1,537,593	May 12, 1925	"
1,535,725	Apr. 28, 1925	"
1,546,634	July 21, 1925	"
1,550,568	Aug. 18, 1925	"
1,535,724	Apr. 28, 1925	"

74

2307 DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance wit hthe Act of February 18, 1922 (42 Stat. 392), you are advised that there was filed on the eleventh day of April, 1930, in this court an action, suit or proceeding No. 783 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address .....
Address Chicago, Illinois,

versus

Name Standard Oil Company of New Jersey, a corporation of Delaware, Defendant,
Address .....
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,281,884	Oct. 15, 1918	Milon J. Trumble
3.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
4.	1,488,325	Mar. 25, 1924	"
5.	1,522,425	Jan. 6, 1925	"
6.	1,525,281	Feb. 3, 1925	"
7.	1,534,927	Apr. 21, 1925	"
8.	1,546,634	July 21, 1925	"
9.	1,549,352	Aug. 11, 1925	Carbon P. Dubbs
10.	1,550,568	Aug. 18, 1925	Robert T. Pollock
11.	1,550,607	Aug. 18, 1925	Carbon P. Dubbs
12.	1,628,270	May 10, 1927	Robert T. Pollock
13.	1,638,735	Aug. 9, 1927	Lyman C. Huff
14.	1,686,654	Oct. 9, 1928	Carbon P. Dubbs
15.	1,703,100	Feb. 26, 1929	Carbon P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

May 7, 1931. Final consent decree dismissing bill of complaint.

In Witness Whereof I have affixed my hand this eighteenth day of May, 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

75

2308 #37

(Stamp) Mail Room Aug 6 1931 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the seventh day of July, 1931, in this court an action, suit or proceeding No. 892 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,

Address Chicago, Illinois,

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and Globe Oil and Refining Company, a corporation of Delaware, Defendants,

Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2.	1,764,296	June 17, 1930	Richard Fleming
3.	.....	.....	.....
4.	.....	.....	.....
5.	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 193..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1.	.....	.....	.....
2.	.....	.....	.....
3.	.....	.....	.....
4.	.....	.....	.....
5.	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed my hand this fifth day of August, 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

76

2309 #38

(Stamp) Mail Room Aug-6 1931 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the seventh day of July, 1931, in this court an action, suit, or proceeding No. 893 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and Skelly Oil Company, a corporation of Delaware, Defendants,
Address .....
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2.	1,543,831	June 30, 1925	do.
3.	1,543,832	June 30, 1925	"
4.	1,764,296	June 17, 1930	Richard Fleming
5.	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 193..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1.			
2.			
3.			
4.			
5.			

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed my hand this fifth day of August, 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

77

2310 #39

(Stamp) Mail Room Aug-6 1931 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the seventh day of July, 1931, in this court an action, suit or proceeding No. 894 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and White Eagle Oil and Refining Co., a corporation of Delaware, Defendants, brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,543,831	June 30, 1925	do.
3	1,543,832	June 30, 1925	"
4	1,764,296	June 17, 1931	Richard Fleming
5			

In the above-entitled case, on the ..... day of ....., 193..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this fifth day of August, 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

78

2311 #40

(Stamp) Mail Room Aug-6 1931 U. S. Patent Office.

District Court of the United States

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the seventh day of July, 1931, in this court an action, suit, or proceeding No. 895 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and Root Refining Company, a corporation of Delaware, Defendants,
Address .....
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,543,831	June 30, 1925	do.
3	1,543,832	June 30, 1925	"
4	1,764,296	June 17, 1931	Richard Fleming
5			

In the above-entitled case, on the ..... day of ....., 193..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this fifth day of August, 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

79

(Stamp) Mail Room Oct-2 1931 U. S. Patent Office.

2312 DISTRICT COURT OF THE UNITED STATES

Northern District of Ohio,

Eastern Division.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. .....), you are advised that there was filed on the 30th day of September, 1931, in this court an action, suit, or proceeding, No. 4018 Equity, entitled—

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name National Refining Company, Defendant,
Address Cleveland, Ohio
brought upon the following patents:

Patent No.	Date of Patent	Patentee
1,378,307	May 17th, 1921	W. H. Young
1,392,629	Oct. 4th, 1921	Carbon P. Dubbs
1,484,445	Feb. 19, 1924	Carbon P. Dubbs
1,534,927	Apr. 21, 1925	Carbon P. Dubbs
1,537,593	May 12, 1925	Gustav Egloff
1,543,831	June 30, 1925	Carbon P. Dubbs
1,543,832	June 30, 1925	Carbon P. Dubbs
1,602,990	Oct. 12, 1926	Robert T. Pollock
1,686,654	Oct. 9, 1928	Carbon P. Dubbs
1,764,296	June 17, 1930	Richard Fleming

In the above-entitled case, on the ..... day of ....., 193 .., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

Patent No.	Date of Patent	Patentee

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof, I have affixed my hand this 30th day of September, 1931, at Cleveland, Ohio.

F. J. Denzler,
Clerk.
By O. W. Nelson,
Deputy Clerk.

80

2313 #42

(Stamp) Mail Room Nov 17 1931 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the seventh day of July, A. D. 1931, in this court an action, suit, or proceeding No. 892 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,

Address Chicago, Illinois

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and Globe Oil and Refining Company, a corporation of Delaware, Defendants,

Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,764,296	June 17, 1930	Richard Fleming
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 193 .., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

October 30, 1931. Final consent decree, dismissing bill of complaint.

In Witness Whereof I have affixed my hand this sixteenth day of November A. D., 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

81

(Stamp) Mail Room Feb 13 1933 U. S. Patent Office.

2314 District Court of the United States
Northern District of Illinois.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 22nd day of July, 1931, in this court an action, suit, or proceeding No. 10,744, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois,

versus

Name Winkler-Koch Engineering Co. et al., Defendant,
Address Wichita, Kansas,

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,378,307	May 17, 1921	W. H. Young
2	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3	1,484,445	Feb. 19, 1924	C. P. Dubbs
	1,534,927	Apr. 21, 1925	C. P. Dubbs
4	1,537,593	May 12, 1925	Gustav Egloff
	1,543,831	June 30, 1925	Carbon P. Dubbs
5	1,543,832	June 30, 1925	Carbon P. Dubbs
	1,602,990	Oct. 12, 1926	Robert T. Pollock
	1,686,654	Oct. 9, 1928	C. P. Dubbs
	1,764,296	June 17, 1930	Richard Fleming

In the above-entitled case, on the ..... day of ....., 193 , the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 1st day of September, 1932, at Chicago, Illinois.

Charles M. Bates,
Clerk of said Court.

82

2315 #44

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the ninth day of March, 1933, in this court an action, suit, or proceeding No. 1019 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,

Address Chicago, Illinois,

versus

Name Octane Oil Refining Company, a corporation of Delaware, Defendant,

Address _____

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	1,890,974	Dec. 13, 1932	Carbon P. Dubbs
4			
5			

In the above-entitled case, on the _____ day of _____, 193_, the following patents have been included by _____ (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

_____

_____

In Witness Whereof I have affixed my hand this eighteenth day of March, 1933, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

83

2316 #45

(Stamp) Mail Room May 17 1933 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 11th day of May, 1933, in this court an action, suit, or proceeding No. 1032 In Equity, entitled:

Name Universal Oil Products Company, Plaintiff,
a corporation of South Dakota,
Address Chicago, Illinois,

versus

Name Black Gold Refining Company, Defendant,
a corporation of Delaware,
Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,890,974	Dec. 13, 1932	Carbon P. Dubbs
3			
4			
5			

In the above-entitled case, on the ..... day of ....., 193 ....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1.			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this fifteenth day of May, 1933, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

84

2317 #46

(Stamp) Mail Room May 25 1934 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 7th day of July, 1931, in this court an action, suit, or proceeding No. 895 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,

Address Chicago, Illinois,

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and Root Refining Company, a corporation of Delaware, Defendants,

Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,543,831	June 20, 1925	do.
3	1,543,832	June 20, 1925	"
4	1,764,296	June 17, 1931	Richard Fleming
5	.....	.....	.....

In the above-entitled case, on the 21st day of June, 1932, the following patents have been excluded by amendment to bill (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	1,543,831	June 30, 1925	Carbon P. Dubbs
2	1,543,832	June 30, 1925	do.
3	1,764,296	June 17, 1931	Richard Fleming
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

May 18, 1934. Interlocutory decree adjudging all claims except claim 6 (not in suit) of U. S. Patent No. 1,392,629 valid and infringed, etc.

In Witness Whereof I have affixed my hand this twenty-fourth day of May, 1934, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

85

2318. #47

(Stamp) Mail Room Jul 28 1934 U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES

District of Kansas.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 25th day of July, 1934, in this court an action, suit, or proceeding No. 819-N, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name ElDorado Refining Company, Defendant,
Address ElDorado, Kansas.

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 25th day of July, 1934, at Wichita, Kansas.

W. G. West,
Clerk of said Court.
By Ruth Williams,
Deputy.

86

2319 #48

DISTRICT COURT OF THE UNITED STATES

District of Kansas, Second Division.

(Stamp) Mail Room Jul 28 1934 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 25th day of July, 1934, in this court an action, suit, or proceeding No. 820-N, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name Kanotex Refining Company, Defendant,
Address Arkansas City, Kansas.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 25th day of July, 1934, at Wichita, Kansas.

W. G. West,
Clerk of said Court.
By Ruth Williams,
Deputy.

87

2320 #49

DISTRICT COURT OF THE UNITED STATES

District of Kansas, Second Division.

(Stamp) Mail Room Jul 28 1934 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 25th day of July, 1934, in this court an action, suit, or proceeding No. 821-N, entitled:
Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name Globe Oil & Refining Company, Defendant,
Address McPherson, Kansas.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 25th day of July, 1934, at Wichita, Kansas.

W. G. West,
Clerk of said Court.
By Ruth Williams,
Deputy.

88

2321 #50

DISTRICT COURT OF THE UNITED STATES,

District of Kansas,

Second Division.

(Stamp) Mail Room Jul 28 1934 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 25th day of July, 1934, in this court an action, suit, or proceeding No. 822-N, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name Dickey Refining Company, Defendant,
Address McPherson, Kansas, brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 25th day of July, 1934, at Wichita, Kansas.

W. G. West,
Clerk of said Court.
By Ruth Williams,
Deputy.

89

2322 #51

District Court of the United States,

Western District of Oklahoma.

(Stamp) Mail Room Aug 27 1934 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 23rd day of August, 1934, in this court an action, suit, or proceeding No. 1645-Equity, entitled:

Name Universal Oil Products Company, a Corporation, Plaintiff,
Address Chicago, Ill.,

versus

Name Anderson-Prichard Oil Corporation, Defendant,
Address Oklahoma City, Oklahoma, brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,488,325	Mar. 25, 1924	Carbon P. Dubbs
3	1,537,593	May 12, 1925	Gustav Egloff
4	1,890,974	Dec. 13, 1932	Carbon P. Dubbs
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

Patent No.	Date of Patent	Patentee
1		
2		
3		
4		
5		

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed my hand this 23rd day of August, 1934, at Oklahoma City, Oklahoma.

Theodore M. Filson,
Clerk of said Court.
By Glenn H. Grubb,
Deputy.
90

2323 #52

District Court of the United States,

District of Delaware.

(Stamp) Mail Room Sep 14 1934 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 11th day of May, 1933, in this court an action, suit, or proceeding No. 1032 In Equity, entitled:
Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name The Black Gold Refining Company, a corporation of Delaware, Defendant,
Address .....
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,890,974	Dec. 13, 1932	do.
3			
4			
5			

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

September 10, 1934. Final consent decree dismissing bill of complaint, without prejudice &c.

In Witness Whereof I have affixed my hand this thirteenth day of September, 1934, at Wilmington, Delaware.

H. C. Mehaffy, Jr.,
Clerk of said Court.

2324 #53

DISTRICT COURT OF THE UNITED STATES,

District of New Jersey.

(Stamp) Mail Division Oct-6 34 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 21st day of September, 1934, in this court an action, suit, or proceeding No. E-4969, entitled:

Name Universal Oil Products Company, Plaintiff,
Address South Dakota

versus

Name Derby Oil & Refining Corporation, Defendant,
Address Jersey City, New Jersey
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Plaintiff
2			
3			
4			
5			

In the above-entitled case, on the ..... day of ....., 193 ....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleadings):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

Sep. 21, 1934 Bill filed

In Witness Whereof I have affixed my hand this 4th day of October, 1934, at Trenton, N. J.

George T. Cranmer,
Clerk of said Court.
By, Charles S. Chevrier,
Deputy.

92

2325 #54

DISTRICT COURT OF THE UNITED STATES,

Northern District of Ohio,

Eastern Division.

(Stamp) Mail Room Nov 8 1934 U. S. Patent Office
Honorable Commissioner of Patents, Washington, D. C.
Sir:

In compliance with the Act of February 18, 1922 (41 Stat. L. .....), you are advised that there was filed on the ..... day of ....., 193....., in this court an action, suit, or proceeding, No. 4018 Equity, entitled—
Name Universal Oil Products Company, Plaintiff,
Address Chicago, Ill.

versus

Name National Refining Company, Defendant,
Address Cleveland, Ohio
brought upon the following patents:

Patent No.	Date of Patent	Patentee
1,378,307	May 17, 1921	W. H. Young
1,392,629	Oct. 4, 1921	Carbon P. Dubbs
1,484,445	Feb. 19, 1924	Carbon P. Dubbs
1,534,927	Apr. 21, 1925	Carbon P. Dubbs
1,537,593	May 12, 1925	Gustav Egloff
1,543,831	June 30, 1925	Carbon P. Dubbs
1,543,832	June 30, 1925	Carbon P. Dubbs
1,602,990	Oct. 12, 1926	Robert T. Pollock
1,686,654	Oct. 9, 1928	Carbon P. Dubbs
1,764,296	June 17, 1930	Richard Fleming

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

Patent No.	Date of Patent	Patentee

In the above-entitled case the following decision has been rendered or decree issued:

11/7/34—Order that all patents in plaintiff's Bill of Complaint, except patents Nos. 1,392,629 and 1,537,593 be dismissed without prejudice filed & ent.

Jones J.

In Witness Whereof, I have affixed my hand this 7th day of November, 1934, at Cleveland, Ohio.

F. J. Denzler,
Clerk.
By O. M. Nelson,
O. M. Nelson,
Deputy Clerk.

93

2326 #55

CIRCUIT COURT OF APPEALS OF THE UNITED STATES

For the Third Circuit.

(Stamp) Mail Room Oct 29 1934 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 20 day of Oct., 1934, in this court an action, suit, or proceeding No. 5648, entitled:
Name Root Refining Co., Defendant-Appellant,
Address Delaware

versus

Name Universal Oil Products Co., Plaintiff-Appellee,
Address Chicago, Ill.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2			
3			
4			
5			

In the above-entitled case, on the 2nd day of March, 1932, the following patents have been included by Answer (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent.	Patentee
1	342,564	May 25, 1886	Benton
2	477,153	June 14, 1892	Pielsticker
3	1,138,260	May 4, 1915	Testelin & Rinard
4	1,170,884	Feb. 8, 1916	Edwards
5	and many other U. S. and Foreign patents		

In the above-entitled case the following decision has been rendered or decree issued:

Not argued in this Court as yet

In Witness Whereof I have affixed my hand this 27th day of Oct., 1934, at Phila.

John P. Kelly,
Deputy Clerk of said Court.

94

2327 56

District Court of the United States,

Northern District of Ohio,

Eastern Division.

(Stamp) Mail Division Mar 8 1935 U. S. Patent Office.
Honorable Commissioner of Patents, Washington, D. C.
Sir:

In compliance with the Act of February 18, 1922 (41 Stat. L. ....), you are advised that there was filed on the 30th day of September, 1931, in this court an action, suit, or proceeding, No. 4018, entitled—

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Ill.

versus

Name National Refining Company, Defendant,
Address Cleveland, Ohio
brought upon the following patents:

Patent No.	Date of Patent	Patentee
1,378,307	May 17, 1921	W. H. Young
1,392,629	Oct. 4, 1921	Carbon P. Dubbs
1,484,445	Feb. 19, 1924	Carbon P. Dubbs
1,534,927	Apr. 21, 1925	Carbon P. Dubbs
1,537,593	May 12, 1925	Gustav Egloff
1,543,831	June 30, 1925	Carbon P. Dubbs
1,543,832	June 30, 1925	Carbon P. Dubbs
1,602,990	Oct. 12, 1926	Robert T. Pollack

(Insert amendment, answer, cross bill, or other pleading)

Patent No.	Date of Patent	Patentee
1,686,654	Oct. 9, 1928	Carbon P. Dubbs
1,764,296	June 17, 1930	Richard Fleming

In the above-entitled case the following decision has been rendered or decree issued:

2/26/35 Order overruling exceptions to Master's report; case dismissed without prejudice at Plaintiff's costs, filed & ent. Jones, J.

In Witness Whereof, I have affixed my hand this 3/7/35 day of ....., 193..., at Cleveland, Ohio.

F. J. Denzler,
Clerk.
By Warner B. Ragatz,
Warner B. Ragatz,
Deputy Clerk.

95

2328 57

District Court of the United States,

Southern District of California.

(Stamp) Mail Division Mar 18, '35 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 12th day of March, 1935, in this court an action, suit, or proceeding No. Eq-568-J, entitled:

Name Universal Oil Products Company, a corpn. (So. Dakota), Plaintiff,
Address Chicago, Ill.

versus

Name Hancock Oil Company, a corpn., (Calif.), Defendant,
Address Long Beach, Calif.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1 392 629	Oct. 4, 1921	Carbon P. Dubbs
2	1 488 325	Mar. 25, 1924	Carbon P. Dubbs
3	1 537 593	May 12, 1925	Gustav Egloff
4			
5			

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 14th day of March, 1935, at Los Angeles, California.

R. S. Zimmerman,
Clerk of said Court.
Murray E. Wire,
By Murray E. Wire,
Deputy Clerk.

96

2329 DISTRICT COURT OF THE UNITED STATES.

District of Kansas,

Third Division.

(Stamp). Mail Division Apr 10-35 U. S Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 1st day of April, 1935, in this court an action, suit, or proceeding No. 449-N, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name National Refining Company, Defendant,
Address Coffeyville, Kansas
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	October 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	1,890,974	December 13, 1932	Carbon P. Dubbs
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192...., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 8th day of April, 1935, at Topeka, Kansas.

W. Gilchrist,
Clerk of said Court.

97

2330 CIRCUIT COURT OF APPEALS OF THE UNITED STATES.

For the Third Circuit.

(Stamp) Mail Division Jun 28 3 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 20th day of Oct, 1934, in this court an action, suit, or proceeding No. 5648, entitled:
Name Root Refining Co., Defendant-Appellant,
Address Delaware

versus

Name Universal Oil Products Co., Plaintiff-Appellee,
Address Chicago, Ill.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4 1921	Carbon P. Dubbs
2			
3			
4			
5			

In the above-entitled case, on the 2nd day of March, 1932, the following patents have been included by Answer (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	342,564	May 25, 1886	Benton
2	477,153	June 14, 1892	Pielsticker
3	1,138,260	May 4, 1915	Testelin-Renard
4	1,170,884	Feb. 8, 1916	Edwards
5	and many other U. S.-Foreign patents.		

In the above-entitled case the following decision has been rendered or decreed issued:

6/26/1935 opinion and decree of this Court affirms lower Court.

In Witness Whereof I have affixed my hand this 27th day of June, 1935, at Phila.

John P. Kelly,
Deputy Clerk of said Court.

98

2331 District Court of the United States.

District of Delaware.

(Stamp) Mail Division Aug 2 35 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392); you are advised that there was filed on the 24th day of July, 1935, in this court an action, suit, or proceeding No. 1121 In Equity, entitled:

Name Universal Oil Products Company a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus.

Name Tyler-Texas Oil and Refining Company, Defendant,
Address a corporation of Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 193..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this thirty-first day of July, 1935, at Wilmington, Delaware.

H. E. Malhaffy, Jr.,
Clerk of said Court.

99

2332 District Court of the United States.

Western District of Oklahoma.

(Stamp) Mail Division Aug 24 25 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 21st day of August, 1935, in this court an action, suit, or proceeding No. 1779 Equity, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois,

versus

Name Omar Refining Company, Defendant,
Address Garber, Oklahoma,
brought upon the following patents:

.....

	Patent No.	Date of Patent	Patentee
1	1,392,629	October 4, 1921	Carbon P. Dubbs,
2	1,488,325	March 25, 1924	Carbon P. Dubbs,
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 21st day of August, 1935, at Oklahoma City, Oklahoma.

Theodore M. Filson,
Clerk of said Court.
By Grace G. Butler,
Deputy.

100

2333 DISTRICT COURT OF THE UNITED STATES.

District of Delaware.

(Stamp) Mail Division Jan 27 1936 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 24th day of July, 1935, in this court an action, suit, or proceeding No. 1121 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Tyler-Texas Oil and Refining Company, Defendant,
Address a corporation of Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3			
4			
5			

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

Jan. 18, 1936. Final consent decree adjudging U. S. Letters Patent Nos. 1,392,629 and 1,537,593 valid and infringed.

In Witness Whereof I have affixed my hand this twenty-fifth day of January, 1936, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

101

2334 **Report No. 608.**

DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Feb 7 1936 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 4th day of August, 1927, in this court an action, suit, or proceeding No. 658 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Mid-Continent Petroleum Corporation, a corporation of Delaware, Defendant,
Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,281,884	Oct. 15, 1918	Milon J. Trumble
2	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3	1,488,325	Mar. 25, 1924	Carbon P. Dubbs
4	1,525,281	Feb. 3, 1925	Carbon P. Dubbs
5	1,546,634	July 21, 1925	Carbon P. Dubbs

In the above-entitled case, on the 25th day of January, 1928, the following patents have been included by counterclaim (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	1,355,313	Oct. 12, 1920	John W. Coast, Jr.
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

Jan. 25, 1936 Consent final decree dismissing bill of complaint and counterclaim, &c.

In Witness Whereof I have affixed my hand this sixth day of February, 1936, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2335 DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Feb-7 1936 U. S. Patent Office

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 31st day of January, 1936, in this court an action, suit, or proceeding No. 1162 In Equity, entitled:

Name Universal Oil Products Company, a corporation of Delaware, Plaintiff,

Address Chicago, Illinois,

versus

Name Empire Oil and Refining Company, a corporation of Delaware, Defendant,

Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,488,325	Mar. 25, 1924	Carbon P. Dubbs
3	1,548,004	July 28, 1925	Lyman C. Huff
4	1,551,090	Aug. 25, 1925	Carbon P. Dubbs
5	1,820,057	Aug. 25, 1931	Carbon P. Dubbs

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this sixth day of February, 1936, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

103

2336 DISTRICT COURT OF THE UNITED STATES,

Eastern District of Louisiana.

(Stamp) Mail Division Jun 25 1936 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (41 Stat. L. .....), you are advised that there was filed on the 23rd day of June, 1936, in this court an action, suit, or proceeding No. 419 (Equity), entitled:
Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name Chalmette Petroleum Corporation, Defendant,
Address New Orleans, La. & St. Bernard Parish, La.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	October 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Universal Oil Products Company, as assignee of Gustav Egloff,
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 23rd day of June, 1936, at New Orleans, Louisiana.

H. J. Carter,
Clerk of said Court.

104

2337 #66

(Stamp) Mail Division, Sep. 11, 1936, U. S. Patent Office.

DISTRICT COURT OF THE UNITED STATES,

District of Kansas, 2nd Division.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 9th day of September, 1936, in this court an action, suit, or proceeding No. 960-N, entitled:

Name Universal Oil Products Co., Plaintiff,
Address Chicago, Ill.

versus

Name National Refining Co., Defendant,
Address Coffeyville, Kans.

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	10/4/21	Carbon P. Dubbs
2	1,537,593	5/12/25	Gustav Egloff
3	1,890,974	12/13/32	Carbon P. Dubbs
4			
5			

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

This case was originally filed at Fort Scott in the 3rd division and has been transferred to this division.

In Witness Whereof I have affixed my hand this 9th day of September, 1936, at Wichita.

Wichita

Howard F. McCue,
Clerk of said Court.
Fred J. Dartudae,
Deputy Clerk.

105

2338 1919

Contents:

1392629

1. Application ..... papers.
2. Reg. May 24, 1919.
3. Amdt. A Sep. 16, 1919.
4. Rejection Mar. 4, 1920.
5. Amdt. B Jul. 6, 1920.
6. Rejection Jul. 28, 1920.
7. Power to Obtain Copies April 11, 1921.
8. Amdt. C Apr. 13, 1921.
9. Amendment Rule June 30, 1921.
10. Notice of entry of Amendment July 12/21.
11. Proposed Amendt. Sep. 28/21.
12. Letter Sept. 30/21.
13. Intf. letter A June 8, 1923.
14. " brief A Far.
15. Notice of Suit Oct. 7, 1925.
16. Notice of Suit Jan. 30, 1926.
17. Notice of Suit April 8, 1926.
18. Notice of Suit April 15, 1926.
19. Notice of Suit June 29, 1926.
20. Notice of Suit Sept. 23, 1926.
21. Notice of Suit Sept. 2, 1927.

22.(a)

22. Notice of Suit Sept. 15, 1927.

23.(a)

23. Notice of Suit Sept. 15, 1927.

24.(a)

24. Notice of Suit Sept. 15, 1927.
25. Notice of Suit Sept. 15, 1927.
26. Notice of Suit April 26, 1928.
27. Notice of Suit Jan. 3, 1929.
28. Notice of Suit Mar. 7, 1929.
29. Notice of Suit April 21, 1930.
30. Notice of Suit June 20, 1930.
31. Notice of Suit Feb. 18, 1931.
32. Notice of Suit Feb. 18, 1931.
33. Notice of Suit Feb. 18, 1931.
34. Notice of Suit Feb. 19, 1931.
35. Notice of Suit Feb. 19, 1931.
36. Notice of Suit May 19, 1931.
37. Notice of Suit Aug. 6, 1931.

38. Notice of Suit Aug. 6, 1931.
39. Notice of Suit Aug. 6, 1931.
40. Notice of Suit Aug. 6, 1931.
41. Notice of Suit Oct. 2, 1931.
42. Notice of Suit Nov. 17, 1931.
43. Notice of Suit Feb. 13, 1933.
44. Notice of Suit Mar. 20, 1933.
45. Notice of Suit May 17, 1933.
46. Notice of Suit May 25, 1934.
47. Notice of Suit July 28, 1934.
48. Notice of Suit July 28, 1934.
49. Notice of Suit July 28, 1934.
50. Notice of Suit July 28, 1934.

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2339 Pat. 1392629

51. Notice of Suit Aug. 27, 1934.
52. Notice of Suit Sept. 14, 1934.
53. Notice of Suit Oct. 6, 1934.
54. Notice of Suit Nov. 8, 1934.
55. Notice of CC Appeals Oct. 29, 1934.
56. Notice of Suit Mar. 8, 1935.
57. Notice of Suit Mar. 18, 1935.
58. Notice of Suit April 10, 1935.
59. Notice of CC Appeals June 28, 1935.
60. Notice of Suit Aug. 2, 1935.
61. Notice of Suit Aug. 24, 1935.
62. Notice of Suit Jan. 27, 1936.
63. Notice of Suit Feb. 7, 1936. Search Made.

Date U. S. Foreign Publication.

64. Notice of Suit Feb. 7, 1936.
65. Notice of Suit June 25, 1936.
66. Notice of Suit Sept. 11, 1936.

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2340 PX 503.

DEPARTMENT OF COMMERCE,

United States Patent Office.

To all persons to whom these presents shall come, Greeting:

This Is to Certify that the annexed is a true copy from the records of this office of the File Wrapper and Contents, in the matter of the Letters Patent of Gustav Egloff, Assignor to Universal Oil Products Company, Number 1,537,593, Granted May 12, 1925, for Improvement in Processes for Cracking Oil.

In Testimony Whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington, this twenty-seventh day of October, in the year of our Lord one thousand nine hundred and thirty-six and of the Independence of the United States of America the one hundred and sixty-first.

Conway P. Coe,
Commissioner of Patents.

(Seal)
Attest:
D. E. Wilson,
Chief of Division.

2341

1537593

Special.

1020

Number (Series of 1915), 429319

(Ex'r's Book) 107
50
Patent No. 1537593
May 12 1925

Div. 31

Name Gustav Egloff.
Assor. to Universal Oil Products Company, of Chicago, Ills., a corp. of South Dakota.
of Independence
County of _____
State of Kansas.
Invention Process ~~and Apparatus~~ for Cracking Oil.
Division of App., No. _____, filed _____, 191__.

Parts of Application Filed.	Original	Renewed
Petition	Dec. 9, 1920	, 191
Affidavit	" ", 1920	, 191
Specification	" ", 1920	, 191
Drawing	" ", 1920	, 191
Photo Copy	, 191	, 191
First Fee 1 Cash $15.	Dec. 9, 1920	, 191
" " Cert.	, 191	, 191
App. filed complete	Dec. 9, 1920	, 191

Examined and Passed for Issue Apr. 14, 1925 , 191
W. N. Holmes Exr. Div. 31 Exr. Div.
Notice of Allowance Apr. 14, 1925 , 191
By Commissioner. By Commissioner.

Final Fee Cash $20 Apr. 15, 1925
Final Fee Cert. _____, 191__.
Patented _____, 191__
Attorney Frank L. Belknap, 1014 1st Nat. Bk. Bldg., Chicago, Ill.
Associate Attorney. Chas. M. Thomas, 916 G. St. N. W., City.
(No. of Claims Allowed 5) Title as Allowed Process for Cracking Oil.
(Cl. 196-58)
(In left-hand margin) Division of App., No. _____, filed _____, 191__.

2342 Paper No. 1, Dec 11 1920.
429,319

(Stamp) $15 Rec'd Dec 9 1920 C. C. U. S. Pat. Office.
To the Commissioner of Patents:

Your petitioner, Gustav Egloff, a citizen of the United States, residing at the City of Independence, County of Montgomery, and State of Kansas, and whose post-office address is General Delivery, Independence, Kansas, respectfully prays that Letters Patent United States may be granted to him for the improvements in process and apparatus for cracking oil set forth in the annexed specification.

He hereby appoints Frank L. Belknap, of 1014 First

National Bank Building, Chicago, Illinois, his attorney, with full power of substitution and revocation, to prosecute this application and to amend the same, to receive the patent when granted and transact all business in the Patent Office connected therewith.

Signed at Independence, State of Kansas, this 2nd day of Dec., 1920.

Gustav Egloff.

(Canceled 25-cent revenue stamp.)

1

2343 To All Whom It May Concern:

Be It Known that I, Gustav Egloff, a citizen of the United States and residing in the City of Independence, County of Montgomery, in the State of Kansas, have invented certain new and useful improvements in

Per exA process*(ES) ~~and apparatus~~ for cracking oil, of which the following is a specification:

This invention relates to improvements in process and apparatus for cracking oil, and refers more particularly to a process in which the oil is distilled under heat and pressure, certain of the vapors subject to reflux condensation and subjected to further cracking, the object in the present instance being to subject the reflux condensate to different conditions of temperature or pressure or both than that to which the raw oil is subjected. Another object of the invention is to, if desired, subject part of the apparatus to vacuum actio

In the drawings, the single figure designates a

* Matter in parentheses inserted.

view partly in vertical section and partly in side elevation of my improved apparatus.

Referring to the drawings, 1 designates a furnace, provided with combustion chambers 2 and 3, separated preferably by a foraminated bridge wall inside. In the respective combustion chambers are mounted the heating

Per B coils 5 and 6, *(EACH OF) which may take the form of a continuous length of several hundred feet of two to eight-inch pipe. The lower coil 5 is connected by feed line 7 to charging pump 8, leading to any suitable source of raw

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2344 oil supply, as for example fuel oil or heavy asphaltic crudes such as California or Mexican crudes containing in themselves little gasolene, or the like. The delivery side of the coil 5 is connected by transfer line 9, having throttle valve 10 and pressure gauge 11, to the

Per B *(END) ~~side~~ of an elongated horizontally disposed expansion chamber 12. This expansion chamber may for example be

Per B 68 *(INCHES) ~~feet~~ in diameter and 40 to 60 ~~feet~~

Per A *(~~INCHES~~) *(FEET) long. It is located outside the fire zone and suitably supported above

Per B the furnace ~~and~~ by means of supports 13. The delivery side of the coil 6 is connected by auxiliary transfer line 14, having throttle valve 15 and pressure gauge 16 to the main transfer line 9. The expansion chamber

* Matter in parentheses inserted.

12 is provided with residue draw off pipe 17, having
throttle valve 18, and with a vapor outlet pipe 19, hav-
ing throttle valve 20, leading to the lower side of the
Per A *(DEPHLEGMATOR) ~~dephligmator~~ 21. The
" " *(DEPHLEGMATOR) ~~dephligmator~~ 21 is pro-
vided with
a series of baffle like plates 22, and at its lower side is connected to reflux return line 23, having throttle valve 24, and leading to reflux oil pump 25 interposed in the feed line 26 leading to the inlet
Per B side of the heating *(COIL) ~~chamber~~ 6. The upper end of the
" A *(DEPHLEGMATOR) ~~dephligmator~~ is connected by vapor line 27, having
throttle valve 28, to the top of condenser coil 29, seated in condenser box 30. The lower end of the coil
29 is connected by pipe 31, having throttle valve 32, to the upper part of receiver 33. This receiver 33 has
liquid level gauge 34, pressure gauge 35, liquid draw off

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2345 pipe 36, controlled by valve 37. It is also provided with two gas outlet pipes 38 and 39, controlled by throttle valves 40 and 41 respectively. The pipe 39 is connected to a vacuum pump 42, whereby a vacuum may
Per A be maintained on the receiver, condenser, *(DE-
PHLEGMATOR) ~~dephligmator~~
and vapor chamber, or on the receiver alone or receiver
" " and condenser alone, or receiver, condenser and *(DEPHLEGMATOR) ~~dephlig-~~
~~mator~~ alone. This is accomplished by suitably regulat-
" " ing the various valves shown. The *(DEPHLEG-
MATOR) ~~dephligmator~~ is pro-

* Matter in parentheses inserted.

vided with pressure gauge 43 and the vapor chamber with
pressure gauge 44.

The process may be carried out as follows: Fuel oil, as for example fuel oil from the Wayside
Kansas field of say 25 degrees Baume, may be heated to a
temperature of say 700 degrees F., and subjected to a
pressure of say 135 pounds in the heating coil 5, and
delivered in substantially liquid phase through the insulated transfer line 9 to the expansion chamber 12. This expansion chamber may be maintained under a pressure
of say 135 pounds. The reflux condensate may be pumped
back by pump 25 to the heating coil 6, and there subjected
to a pressure of 175 pounds and a temperature of say
770 degrees F. It is delivered in substantially liquid
phase to the vapor chamber 12.

It will be thus seen that the reflux condensate is continuously subjected to recracking, but at different
conditions of temperature or pressure, or both, than
that to which the raw oil is subjected. A process may be

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2345 carried out in the apparatus in the manner just above
Per A described, except that the *(DEPHLEGMATOR) ~~*dephlegmator*~~, condenser and
receiver, instead of being under a pressure of 135 pounds as in the first case, may be subjected to a vacuum through suitably regulating the vacuum pump,

* Matter in parentheses inserted.

opening the valve 41, closing the valve 40, and regulating the valve 20, valves 28 and 32 being also open.

2347 I claim as my invention;
(C[1]-cls. 1-5)

Per A ~~*(1) A process for cracking oil, consisting in subjecting a petroleum oil of a given character to* °*(CRACKING)* †[*predetermined*] *conditions of temperature and pressure, delivering the oil in substantially liquid phase to an expansion chamber, taking off vapors therefrom and subjecting them to* °*(A REFLUX CONDENSING)* †[*continuous*] *action, continuously returning* °*(REFLUX)* *condensate to* °*(AN INDEPENDENT HEATING COIL)* †[*the heating chamber*] *where it is subjected to a* †[*predetermined*] *condition of temperature and pressure independently controlled relative to the temperature and pressure to which the raw oil was subjected.*~~

" " ~~*(2) A process for cracking oil, consisting in subjecting a petroleum oil of a given character to* °*(CRACKING)* †[*predetermined*] *conditions of temperature and pressure, delivering the oil in substantially liquid phase to an expansion chamber, taking off vapors therefrom and subjecting them to* °*(A REFLUX CONDENSING)* †[*continuous*] *action, continuously returning a portion of the* °*(REFLUX)* *condensate to* °*(AN INDEPENDENT HEATING COIL)* †[*the heating chamber*] *where it is subjected to a predetermined condition of*~~

° Matter in parentheses inserted.
† Matter in brackets precanceled.

~~*temperature and pressure independently controlled relative*~~
~~*to the temperature and pressure to which the raw oil was*~~
~~*subjected, and maintaining a controlled vacuum on the*~~
~~*condensing part of the apparatus during the cracking*~~
Per B ~~*operation.*~~
~~*Insert A*~~[1]
Sub C[1]>

Gustav Egloff.

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2348 State of Kansas, }
County of Montgomery. } ss.:

Gustav Egloff, the above named petitioner, being sworn, deposes and says that he is a citizen of the United States of America, and a resident of the City of Independence, County of Montgomery, in the State of Kansas; that he verily believes himself to be the original, first and sole inventor of the improvements in process and apparatus for cracking oil described and claimed in the annexed specification; that he does not know and does not believe that the same was ever known or used before his invention or discovery thereof, or patented or described in any printed publication in any country before his invention or discovery thereof, or more than two years prior to this application, or in public use or on sale in the United States for more than two years prior to this application; that said invention has not been patented in any country foreign to the United States on an application filed by him or his legal representatives or assigns more than twelve months prior to this application; and that no application for patent on said improvements has been filed by him or his representatives or assigns in any country foreign to the United States.

Gustav Egloff.

Sworn to and subscribed before me this 2nd day of Dec., 1920.

Sam V. Ketchum,

(Seal)

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2349 2—260

Div. 31 Room 169, Paper No. 2

Address only "The Commissioner of Patents, Washington, D. C.," and not any official by name.

All communications respecting this application should give the serial number, date of filing, title of invention, and name of the applicant.

DEPARTMENT OF THE INTERIOR

United States Patent Office

Washington

CSD/AMT

(Stamp) Patent Office Mailed Dec 8—1921.

Frank L. Belknap
1014 1st Nat'l Bank Bldg.
Chicago, Ills.

Please find below a communication from the Examiner in charge of the application of Gustav Egloff, filed Dec. 9, 1920, serial #429,319, for Process and Apparatus for Cracking Oil.

Thomas E. Robertson,
Commissioner of Patents.

Examined.

Page 2, line 8, should not "68 feet" be —68 inches—.

Page 2, lines 16 and 22, correct "dephlegmator".

Page 3, lines 4, 6, 7 and 8, correct "dephlegmator".

Page 4, line 2, correct "dephlegmator".

In line 6 of the claims, should not "continuous action" be —refluxing condensing action— ?.

Is only a "portion" of the condensate returned for treatment as set forth in the claims?

The following patents are made of record:

Rosenbaum	1,324,983	Dec.	16, 1919—	196-3
Perkins	399,073	Mar.	5, 1899—	196-31
Gillons	1,084,080	Jan.	13, 1914—	196-13
Sherman	1,288,711	Dec.	24, 1918—	196-3
Lang	954,575	Apr.	12, 1910—	"
Trumble	1,281,884	Oct.	15, 1918—	196-31

A clear line of division should be maintained between this case and applicant's copending application serial No. 428,787.

Claim 1 is rejected on Lang cited. In this reference 5 is considered as the raw oil heating coil, 8 as the expansion chamber, 15 as the reflux condenser, and element 29 as the

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2350 reflux condensate heating coil. Whether the liquid is delivered to the expansion chamber in liquid or vapor phase is merely a matter of temperatures and pressures.

Claim 1 is further rejected on Gillons cited.

Claim 1 is also rejected in view of the treatment of reflux condensate under independently controllable conditions of temperature and pressure disclosed by Rosenbaum cited. To substitute a coil still, as in Trumble, in the process of Rosenbaum is not seen to involve invention.

Claim 2 is rejected as unsupported by a disclosure satisfying R. S. 4888. Applicant has not set forth what benefits he obtains from a vacuum. The mere statement of the use of a vacuum can not be interpreted as a "full, clear, concise and exact" description as required by law.

W. N. Holmes,
Examiner.

C.S.D.

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2351

Paper No. 3.
Dec. 9—1927.A
Division 31.

(Stamp) Application Div. Dec 8 1922 U. S. Patent Office.

IN THE UNITED STATES PATENT OFFICE.

Div. 31, Room 169,
Gustav Egloff,
Process and Apparatus for
Cracking Oil,
Filed Dec. 9, 1920,
Serial No. 429,319.

Hon. Commissioner of Patents,
Sir:

In the matter of the above entitled application, and responding to the official action of Dec. 8, 1921, amendment is hereby made as follows:

Page 2, line 8, change "feet" to [—inches—.] Same page, lines 16 and 22, correct "dephlegmator".

Page 3, lines, 4, 6, 7, and 8, correct "dephlegmator".

Page 4, line 2, correct "dephlegmator".

Claim 1, line 2, change "predetermined" to [—cracking—.] Same claim, line 6, cancel "continuous" and insert [—a reflux condensing—.] Same claim, line 7, cancel "a portion of". Same claim, same line, cancel "the heating chamber" and insert [—an independent heating coil—].

Claim 2, line 2, cancel "predetermined" and insert [—cracking—.] Same claim, line 6, cancel "continuous" and insert [—a reflux condensing—]. Same claim, line 7, cancel "the heating chamber" and insert [—an independent heating coil—.]

The applicant has very carefully amended the two claims so that they unmistakably differ from Lang, Gillons or Rosenbaum.

Rosenbaum does not show the independent cracking coil for the reflux which is distinctly different from the crack-

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2352 ing coil for the raw oil and neither is this illustrated in the Gillons citation or the patent to Lang. Each claim is limited to such a process and the novelty of the process is predicated on just this idea. The applicant will not enter into a discussion as to whether or not the patent to Trumble can be reorganized with the patent to Rosenbaum in an effort to anticipate the claims. In his judgment such a reorganization cannot be effected, and if this manner of applying references is insisted upon it will be necessary to enter an appeal. However, it should be sufficient to point out that Rosenbaum does not show the separate way in which the reflux is treated entirely distanct and away from the raw oil, and neither does the patent to Trumble illustrate this idea. In Trumble reflux is returned along with the raw oil for passage through the heating coil. There is no independent treatment.

In regard to claim 2, applicant begs to state that he uses a vacuum for the purpose of lowering the boiling point of the oils where certain grades of oil are used. It is well known in the oil industry that pressure raises the boiling point of all oil so the applicant has taken advantage of this

knowledge, and has disclosed in his process a means for causing the boiling point of the oil to be maintained as low as possible where it is desired to treat the oil in this manner which frequently happens under many conditions.

Add the following new claim:

2. A process of cracking oil consisting in passing raw oil continuously through a coil to be subjected to

A[1] *cracking conditions of temperature and pressure, in introducing the* ~~*(HEATED) CRACKED)*~~ *oil to an expansion chamber where vaporization occurs, in passing the vapors to a dephlegmator, in collecting the reflux condensate and in passing said condensate through a separate coil subjected to conditions of temperature and pressure independly controllable*

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2353 *relative to the temperatures and pressures to which the raw oil is subjected, in discharging vapors from the dephlegmator, and in condensing and collecting the same.*

Sub B[1]

The new claim is clearly allowable for the reasons as urged in support of claim 1.

Respectfully submitted,

Gustav Egloff,
By Frank L. Belknap,
Attorney.

Washington, D. C.,
Dec. 8, 1922.

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2354 2-260

Div. 31 Room 169 Paper No. 4

Address only "The Commissioner of Patents, Washington, D. C.," and not any official by name.

All communications respecting this application should give the serial number, date of filing, title of invention, and name of the applicant.

DEPARTMENT OF INTERIOR

IS-AMT United States Patent Office

Washington

(Stamp) Patent Office Oct 17 1923 Mailed

Frank S. Belknap
1st Nat. Bank Bldg.
Chicago, Ills.

Please find below a communication from the Examiner in charge of the application of Gustav Egloff, filed Dec. 9, 1920, serial #429319, for Process and Apparatus for Cracking Oil.

Thomas E. Robertson,
Commissioner of Patents.

Amendment of Dec. 8, 1922 is of record. Claim 1, line 7, before "condensate" insert —reflux— and in line 8, cancel "predetermined" and pluralize "condition".

Claim 2, line 7, cancel "a portion of" and before "condensate" insert —reflux; in line 8 cancel "a predetermined" and pluralize "condition".

Claim 3, line 4, before "oil" insert —heated— or —cracked—.

The following references are added to the record:

Forward	1202,823	Oct. 31, 1916	196-32
Curran	1255,714	Feb. 6, 1918	"
Von Groeling	1295,088	Feb. 18, 1919	196-31
Coast	1388,629	Aug. 23, 1921	"
Wellman	1273,966	July 30, 1918	"
Fenchelle (Brit.)	6,547	Mar. 14, 1914	196-31 (1 sht.)

Claim 1 is rejected on Perkins, Wellman, Rosenbaum,

Curran, Coast, or Fenchelle, all of record, who show the treatment of the reflux condensate under conditions of temperature and pressure different from that maintained on the raw oil. Attention is called to lines 17-26, page 2 of Rosenbaum. Thus it will be seen that the reflux is treated under different conditions than the raw oil in 1. Applicant 13

2355 2

also mixes his cracked reflux with his cracked raw oil in expansion chamber 12, and that is what still 1 of Rosenbaum is equivalent to. The substitution of the applicant's coil still for the drum stills of Curran does not alter the process which is shown to be old by Curran. The reflux condensate of Coast is only treated in still 1 whose temperature and pressure is independent of the temperature and pressure in 11.

Claim 2 is rejected on the reference cited for claim 1, in view of Von Groeling who states that a vacuum may be maintained on the condensing apparatus, p. 4, ls. 100-127.

The claim is also rejected as unsupported by a disclosure in the specification, according to R. S. 4888, setting out the benefits of a vacuum being maintained on the condenser.

Claim 3 is rejected on Forward, Rosenbaum, Perkins, Coast, Curran or Fenchelle.

W. N. Holmes,
Examiner.

I. S. 14

2356 In the United States Patent Office.

Paper No. 5 Aug 21 1924 Division 31.

(Stamps) Application Div. Aug 20 1925 U. S. Patent Office.

Div. 31. Room 169
Gustav Egloff
Process and Apparatus for
Cracking Oil
Filed Dec. 9, 1920
Serial No. 429319

Hon. Commissioner of Patents,

Sir:

In the matter of the above entitled application, and responding to Office Action of October 17, 1923, amendment is hereby made as follows:

Page 1, line 4 from the bottom, preceding "which" insert—each of—

Page 2, line 6, change "side" to —end—

It is noted that the direction given in the last amendment regarding the changing of feet to inches in line 8 of page 2 did not indicate which occurrence of the word "feet" should be changed. The direction should have been to change "feet" first occurrence, in line 8 of page 2 to —inches—.

Page 2, line 10, cancel "and"; same page, line 7 from the bottom, change "chamber" to —coil—

Cancel the claims now in the application and insert in lieu thereof the following:

B¹ ~~1. A process of cracking oil, consisting in continuously passing raw oil through a coil of restricted cross sectional area and subjecting it therein to a cracking temperature under a self-generated vapor pressure, in discharging the heated oil into an enlarged~~

Sub C¹

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2357 ~~expansion chamber where substantial vaporization occurs, in dephlegmating the vapors issuing from said vapor chamber, in passing the condensate resulting from said dephlegmation through a second heating coil to be reheated therein, in discharging the heated reflux condensate from said second coil into said expansion chamber, in maintaining differential pressures on said heating coils, and in condensing the uncondensed vapors passing over from said dephlegmator, and in collecting the resulting distillate.~~

~~2. A process of cracking oil, consisting in continuously passing raw oil through a coil of restricted cross sectional area and subjecting it therein to a cracking temperature under a self-generated vapor pressure, in discharging the heated oil into an en-~~

larged expansion chamber where substantial vaporization occurs, in dephlegmating the vapors issuing from said vapor chamber, in passing the reflux condensate resulting from said dephlegmation through a second heating coil to be reheated therein, in discharging the heated reflux condensate from said second coil into said expansion chamber in continuously withdrawing residuum from said vapor chamber to be isolated from the system, in maintaining differential pressures on said heating coils, and in condensing the uncondensed vapors passing over from said dephlegmator, and in collecting the resulting distillate.

3. A process of cracking oil, consisting in continuously passing raw oil through a coil to be heated therein to a cracking temperature under a self-generated vapor pressure, in discharging the heated oil into an enlarged expansion chamber, in dephlegmating the vapors issuing from said vapor chamber, in passing the reflux condensate resulting from said dephlegmation under an applied pressure through a second heating coil to be reheated therein under a higher pressure than that maintained in the first heating coil, in discharging the heated reflux condensate from said second coil into said expansion chamber, in condensing the vapors resulting from said dephlegmation under a vacuum, and in collecting the resulting distillate.

2358 **REMARKS:**

The specification has been carefully reviewed, and several formal corrections have been made therein.

The references relied on by the Examiner in his rejection of the claims have all been given careful consideration, and the rejected claims have been canceled. Three claims are submitted with this amendment which have been carefully framed in view of the prior art patents and the reasons for rejection which have been advanced by the Examiner. While it is true that several of the references suggest treating the reflux condensate separately from the raw oil, applicant fails to find in any single reference a continuous process wherein the raw oil is passed through a heating coil discharged into a vapor chamber, the vapors subjected to dephlegmation, and the reflux condensate passed through a second heating coil, either under applied pressure or wherein differential pressures are maintained. The limitations included in the present claims are supported by the disclosure and are certainly believed to differentiate applicant's invention from such patents as Perkins, Wellman, Curran, Coast or the British patent to Fenchelle, none of which discloses a continuous process as defined by the present claims. In the absence of more pertinent art than that now of record, this application should be passed to early allowance, and such action on the part of the Examiner is most courteously requested.

Respectfully submitted,

Gustav Egloff,
By Frank L. Belknap,
Attorney.

Aug. 19, 1924

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2359

SS/NH

Div. 31 Room 314

Address only "The Commissioner of Patents, Washington, D. C.," and not any official by name.

Paper No. 6

All communications respecting this application should give the serial number, date of filing, title of invention, and name of the applicant.

DEPARTMENT OF THE INTERIOR

United States Patent Office

Washington

(Stamp) Patent Office Dec 13 1924 Mailed

Frank L. Belknap,
1014 1st Natl. Bank Bldg.,
Chicago, Ill.

Please find below a communication from the Examiner in charge of the application of Gustav Egloff, filed Dec. 9, 1920, Serial #429,319. Process apparatus for cracking oil.

Thomas E. Robertson,
Commissioner of Patents.

Amendment filed Aug. 20, 1924 is of record.

In claim 1, lines 9 and 10, the clause, "in maintaining differential pressures on said heating coils" should be changed so as to bring out that the temperature and pressure maintained on the second heating coil is higher than that on the first coil. When so amended, claim 1 may be allowed.

Claim 2 is held not to be patentably distinct from claim 1. The step of continuously withdrawing residuum from said vapor chamber is essential to a successful carrying out of the process defined by claim 1, and hence claim 2 is in reality for the same process as that covered in claim 1. Claim 2 is accordingly rejected as not being patentable over claim 1.

Claim 3 differs from claim 1 only by the inclusion of the well-known step of condensing under vacuum, and as such,

does not make a new combination patentable over claim 1. Claim 3 is accordingly also rejected on claim 1.

Attention is however called to the fact that there is no clear line of division between claim 1 and the subject matter claimed in applicant's co-pending application, serial #428,787.

W. N. Holmes,
Examiner.
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2360 Asso. Power of Atty.

ASSOCIATE POWER OF ATTORNEY.

(Stamps) U. S. Patent Office Application Div. Mar 16 1925. Paper No. 7 Division Mar 17 1925.

Hon. Commissioner of Patents,
Washington, D. C.

Sirs:

Please recognized ~~*Seward Bacon,*~~ Charles H. Thomas, ~~*and Francis D. Thomas, constituting*~~ *(OF) the firm of Bacon & Thomas, 916 G. Street, Northwest, Washington, D. C., Registration No. 11239, as ~~our~~ *(MY) associate (S) in the prosecution of the application of Gustav Egloff filed December 9, 1920, Serial No. 429319, for improvements in Process Apparatus for Cracking Oil, and address all communications relating thereto to ~~them~~. *(HIM).

Signed at Chicago, Illinois, this 13th day of March, 1925.

Frank L. Belknap

(Stamp) 25.

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* Matter in parentheses inserted.

2361 IN THE UNITED STATES PATENT OFFICE.

(Stamp) Application Div. U. S. Patent Office Mar 16 1925.

(Stamp) Paper No. 8 Mar 17 1925 Division 31. C.

Div. 31, Room 169.
Gustav Egloff.
Process and Apparatus for Cracking Oil.
Filed Dec. 9, 1920.
Serial No. 429319.
} March 16, 1925.

Hon. Commissioner of Patents,
Sir:

In the matter of the above entitled application, and responding to Office Action of December 18, 1924, it is respectfully asked that all the claims be canceled, notwithstanding the fact that claim 1 is regarded as allowable subject to certain suggestions. This cancellation is made in view of the fact that it is thought that the invention can be set forth in better from in new claims, and in order to bring the application to an early formal allowance such claims are presented at this time.

Add the following claims:

C[1] 1. A process of oil conversion, consisting in maintaining a body of heated hydrocarbons in an enlarged zone
where substantial vaporization occurs, in subjecting the evolved
vapors to reflux condensation to condense the heavier vapors,
in passing the reflux condensate in an advancing stream through
a heating zone where it is subjected to a cracking temperature,
in delivering the said heated condensate to the enlarged zone,
in simultaneously heating an independent advancing stream of
charging stock to a cracking temperature, in delivering the said

heated charging stock to said enlarged zone, and in maintaining

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2362 a superatmospheric pressure on both of said oil streams and
on the body of hydrocarbons in said enlarged zone.

2. A process of oil conversion, consisting in maintaining a body of heated hydrocarbons in an enlarged zone
where substantial vaporization occurs, in subjecting the vapors
to reflux condensation to condense the heavier fractions of
the vapors, in passing reflux condensate in an advancing stream
through a heating zone where it is subjected to a cracking
temperature, in delivering the heated condensate to said en-
larged zone, in simultaneously heating an independent stream
C.M.T. of charging stock to a cracking temperature *(WHILE UNDER A SUPERATMOSPHERIC PRESSURE), in introducing
said heated charging stock to said enlarged zone in which
zone the charging stock and heated condensate physically
Per D commingle, and *(IN) maintaining the stream of reflux condensate
while being heated ~~to~~ *(UNDER) a superatmospheric pressure ex-
ceeding the pressure maintained on the stream of charging
stock.

3. A process of oil conversion, consisting in maintaining a body of heated hydrocarbons in an enlarged
zone where substantial vaporization is permitted, in subject-
ing the vapors to reflux condensation to condense the heavier
fractions thereof, in passing the resulting reflux condensate

* Matter in parentheses inserted.

in an advancing stream through a heating zone where it is
subjected to cracking conditions of temperature and pressure,
in delivering said heated condensate to the enlarged zone, in
simultaneously heating an independent advancing stream of charging
C.M.T. stock to be delivered to said enlarged zone *(AT) ~~to~~ a temperature
lower than the temperature of the stream of reflux condensate,
but sufficiently high to cause a substantial vaporization of
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2363
the charging stock in said enlarged zone, and in introducing
said heated charging stock to said enlarged zone.

4. A process of oil conversion, consisting in maintaining a body of heated hydrocarbons in an enlarged zone
where substantial vaporization occurs, in subjecting the vapors
to reflux condensation to condense the heavier vapors, in
passing the reflux condensate in an advancing stream through
a heating zone where it is subjected to cracking conditions
C.M.T. of temperature and pressure in delivering *(THE) heated condensate
to said enlarged zone and simultaneously heating an independent
stream of charging oil for delivery to said enlarged zone to
a temperature sufficient to cause a substantial vaporization
thereof in said zone, and in introducing said heated charging
C.M.T. *(OIL) ~~stock~~ to the enlarged zone.

5. A process of oil conversion, consisting in maintaining a body of heated hydrocarbons in an enlarged zone

* Matter in parentheses inserted.

where substantial vaporization occurs, in subjecting vapors
to reflux condensation to condense the heavier vapors, in passing the reflux condensate in an advancing stream through a
heating zone where it is subjected to cracking conditions of
temperature and pressure, in delivering heated condensate to
M.D. said enlarge zone, and simultaneously heating an independent
stream of charging oil for delivery to said enlarged zone to
a temperature sufficient to cause a substantial vaporization
thereof in said zone, in introducing said heated charging
C.M.T. *(OIL) ~~stock~~ to the enlarged zone, and in withdrawing unvaporized oil
from said enlarged zone without permitting the same to again
enter either of said oil streams.

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2364 **REMARKS**

Attention is called to the recent oral interview had with the Examiner today, wherein the present claims were considered, and it is thought that the application is now ready for allowance. The applicant has attempted to prevent a multiplicity of claims, and the five claims herein presented are drawn to cover all of the patentable subject matter in this case and to also, if possible, eliminate the prosecution of certain other copending applications that moreorless conflict with this disclosure. It is thought that the five claims so clearly distinguish from one another that it will be apparent to the Examiner that it is necessary to include all of these claims to adequately protect this invention.

In passing now to the merits of this process, the Examiner's attention is called to the fact that nowhere in the prior art is there a disclosure of an enlarged chamber

* Matter in parentheses inserted.

where a body of hydrocarbons is maintained and where vaporization occurs such, for instance, as the chamber 12, and from which chamber the vapors pass to a dephlegmator 23 where the insufficiently cracked vapors are condensed, and the condensate alone passed in an advancing stream through the coil 6 which is disposed in the furnace to receive its cracking heat for return to the expansion chamber 12. During this time, in accordance with this process, an independent stream of charging oil is advancing through the coil 5 and enters the chamber 12 with the condensate. Obviously, in this process the condensate is given such a treatment as is found to be necessary for 23

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properly cracking reflux condensate. This treatment may, and usually does, exceed the treatment necessary to be given ordinary charging stock. Realizing this, the applicant separates these two coils, giving the charging stock such a treatment as he deems advisable in an independent coil, while at the same time he gives the condensate its most favorable condition of treatment to promote the conversion of the oil, uniting these two oils near the entrance to the expansion chamber 12. The Examiner well knows that the greater part of the oil in a system of this kind is reflux oil. There is therefore no reason why the raw oil should be over-heated and excessively carbonized because such oil is usually much heavier laden with carbon than reflux oil, merely because it is necessary to highly heat the reflux oil to bring about the proper conversion thereof. Every claim in issue specifically states that the two streams of oil are independently heated. The claims also further state that the oil heated in such system is united in the common enlarged zone and that substantial reflux oil alone is heated in one stream while charging stock is heated in another stream. Some of the claims bring in the specific features of the process as set forth in the illustrative run in the application, while others are a little broader, but they are all limited to the steps herein discussed.

If the Examiner will review the prior art he will find that this invention is broadly new. Perhaps the closest reference is the patent to Rosenbaum, but in Rosenbaum only a stream of reflux oil is heated, and all the raw oil that 24

2366

is heated has such oil as is disposed in a shell still 1. The reflux oil furthermore goes into this shell still and is there heated with whatever raw oil the still may contain. There is not the remotest suggestion in this patent of the heat treatment of the two different oils in two separate chambers with the uniting of these oils after such heat treatment in an enlarged zone where vaporization is permitted. In fact, all that Rosenbaum shows is a still of the shell type to which preheated reflux can be introduced.

The patent to Coast is not as pertinent as the Rosenbaum patent. In fact, the reflux condensate goes directly to the shell still 1. There is no disclosure in this patent of the idea of heating independently the two separate streams of oil and uniting them in the common receiver.

The reference Curran merely shows a shell still for cracking reflux condensate.

Sherman discloses a cyclic system in which system reflux condensate may be also cracked, but all the cracking occurs in a single coil, and the two oil constituents are not separately heated and then united in a zone after they have received their working temperatures.

It is believed that the Examiner appreciates the novelty of this invention and that the claims herein sought are substantially similar in scope to claim 1, which the Examiner agreed to allow. They have been merely changed in form to more clearly express the invention, and some of these claims have eliminated immaterial statements

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2367

found in formerly allowable claim 1, but such statements have no effect on the allowability of the claims.

The case is ready for immediate allowance.

Respectfully submitted,

Gustav Egloff,
By Charles M. Thomas,
Attorney.

26

2368 IN THE UNITED STATES PATENT OFFICE.

(Stamps) Application Div Mar 17 1925 U. S. Patent Office. Paper No. 9 Mar 18 1925 D Division 31.
Div. 31, Room 169
Gustav Egloff
Process and
Apparatus for
Cracking Oil
Filed Dec. 9, 1920
Serial No. 429319

SUPPLEMENTAL AMENDMENT.

Hon. Commissioner of Patents,

Sir:

In the matter of the above entitled application, and supplementing the amendment filed yesterday, please amend the application as follows:

Claim 2, line 12, after "and" insert —in—; same claim, line 13, after "heated" cancel the word "to" and insert —under—.

Claim 5, line 8, after "zone" insert a comma.

REMARKS.

The application is now believed to be in condition for immediate allowance.

Respectfully submitted,
Gustav Egloff,
By Charles M. Thomas,
Attorney.

March 17, 1925.

27

2369 Div. 31 Room 314

Address only "The Commissioner of Patents, Washington, D. C.," and not any official by name.

Paper No. 10

All communications respecting this application should give the serial number, date of filing, title of invention, and name of the applicant.

Department of ~~the Interior~~ Commerce

United States Patent Office.

Washington

(Stamp) Patent Office Apr 10 1925 Mailed.

Examiner's Amendment.

Chas. M. Thomas
916 G. St. N. W.
Washington, D. C.

Please find below a communication from the Examiner in charge of the application of Gustav Egloff, filed Dec. 9, 1920, Serial No. 429,319. Process for cracking oil.

Thomas E. Robertson,
Commissioner of Patents.

In accordance with the provisions of Order No. 2308, dated March 12, 1917, which reads in part as follows:

* * * * * *

Obvious informalities in the application may be corrected by the examiner, but said correction must be in the form of an amendment, approved by the Principal Examiner in writing, placed in the file, and made a part of the record. The changes specified in the amendment will be entered by the clerk in the regular way.

* * * * * *

the changes, hereinafter specified, are made by the examiner in the application above identified.

Should these changes not be satisfactory to the applicant, appropriate amendment may be proposed under the provisions of Rule 78, provided the specification has not been printed.

The application has been amended as follows:

Title of the invention has been changed to —Process for Cracking Oil— and the application passed to issue.

W. N. Holmes,
Examiner.
28

(In left-hand margin): S.S.

2370 Div. 31-MJT
Address Only
The Commissioner of Patents
Washington, D. C.

Serial No. 428,319

United States Department of ~~the Interior~~ Commerce
Patent Office
Washington

April fourteenth 1925

Gustav Egloff, Assor., etc.

Sir:

Your Application for a patent for an Improvement in Process for cracking oil, filed Dec. 9, 1920, has been examined and Allowed (5 claims).

The final fee, Twenty Dollars, must be paid not later than Six Months from the date of this present notice of allowance. If the final fee be not paid within that period, the patent on this application will be withheld, unless renewed within two years after the date of this notice with an additional fee of $20, under the provisions of Section 4897, Revised Statutes.

The office delivers patents upon the day of their date, and on which their term begins to run. The printing, photolithographing, and engrossing of the several patent parts, preparatory to final signing and sealing, will require about four weeks, and such work will not be undertaken until after payment of the necessary fee.

When you send the final fee you should also send, Distinctly And Plainly Written, the name of the Inventor, Title Of Invention, And Serial Number As Above Given, Date Of Allowance (which is the date of this circular), Date Of Filing, and, if assigned, the Names Of The Asignees.

If you desire to have the patent issue to Assignees, an assignment containing a Request to that effect, together with the Fee for recording the same, must be filed in this office on or before the date of payment of final fee.

After issue of the patent uncertified copies of the drawings and specifications may be purchased at the price of Ten Cents Each. The money should accompany the order. Postage stamps will not be received.

Final fees will Not be received from other than the applicant, his assignee or attorney, or a party in interest as shown by the record of the Patent Office.

Respectfully,
Thomas E. Robertson,
Commissioner of Patents.

Chas. M. Thomas
916 G St. N. W.
Washington, D. C.

(In left-hand margin) ☞In Remitting The Final Fee Give The Serial Number At The Head Of This Notice.

(In right-hand margin) ☞Uncertified Checks Will Not Be Accepted.

29

2371 2—327

(Stamp) $20.00 Rec'd Apr 15 1925. C. C. U. S. Pat. Office.

Final Fee Paid to United States Patent Office

(Be careful to give correct Serial No.)

Serial No. 429319.
Inventor: Gustav Egloff.
Patent to Be Issued to: As per record.
Name of Invention, as Allowed: Process for Cracking Oil.
Date of Payment: April 15, 1925.
Fee: $20.
Date of Filing: Dec. 9, 1920.
Date of Circular of Allowance: April 14, 1925.

The Commissioner of Patents will please apply the accompanying fee as indicated above.

Charles M. Thomas,
Attorney.

Send Patent To: Attorney of record.

Final fees will not be received from other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

30

2372 UNITED STATES DISTRICT COURT,

Southern District of New York.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. ....), you are advised that there was filed on the 27th day of January, 1926, in this court an action, suit, or proceeding No. S. 35-197, entitled:
Name Universal Oil Products Co., Plaintiff,
Address Chicago Ill.

versus

Name Gasoline Products Co. & The M. W. Kellogg Co., Defendants,
Address N. Y. N. Y. brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1392629	Oct. 4, 1921	Universal Oil Products Co.
2	1484445	Feb. 19, 1924	Universal Oil Products Co.
3	1488325	Mar. 25, 1924	Universal Oil Products Co.
4	1522425	Jan. 6, 1925	Universal Oil Products Co.
5	1517830	Dec. 2, 1925	Universal Oil Products Co.
6	1525281	Feb. 3, 1925	Universal Oil Products Co.
7	1534927	Apr. 2, 1925	Universal Oil Products Co.
8	1537593	May 28, 1925	Universal Oil Products Co.
9	1535725	Apr. 28, 1925	Universal Oil Products Co.
10	1546634	July 21, 1925	Universal Oil Products Co.
11	1550568	Aug. 18, 1925	Universal Oil Products Co.
12	1535724	Apr. 28, 1925	Universal Oil Products Co.

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed my hand this 28th day of January, 1926, at N. Y. N. Y.

Alex. Gilchrist, Jr.,
Clerk of said Court.
31

2373 DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Apr 8 1916 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 11th day of March, 1929, in this court an action, suit, or proceeding No. 716 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Ill.

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and Root Refining Company a corporation of Delaware, Defendants,
Address .....
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,378,307	May 17, 1921	W. H. Young
2	1,484,445	Feb. 19, 1924	C. P. Dubbs
3	1,534,927	Apr. 21, 1925	do.
4	1,537,593	May 12, 1925	Gustav Egloff
5	1,602,990	Oct. 12, 1926	Robert T. Pollock
6	1,686,654	Oct. 9, 1928	C. P. Dubbs

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this thirtieth day of March, 1929, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

32

2374 District Court of the United States,

District of Delaware.

(Stamp) Mail Room Apr 8 1916 U. S. Patent Office

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 11th day of March, 1929, in this court an action, suit, or proceeding No. 717 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Ill.

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and White Eagle Oil and Refining Co., a corporation of Delaware, Defendants,
Address .....
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,378,307	May 17, 1921	W. H. Young
2	1,484,445	Feb. 19, 1924	C. P. Dubbs
3	1,534,927	Apr. 21, 1925	do.
4	1,537,593	May 12, 1925	Gustav Egloff
5	1,602,990	Oct. 12, 1926	Robert T. Pollock
6	1,686,654	Oct. 9, 1928	C. P. Dubbs

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this thirtieth day of March, 1929, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

33

2375 DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 11th day of March, 1929, in this court an action, suit, or proceeding No. 716 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,

Address Chicago, Ill.

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and Root Refining Company, a corporation of Delaware, Defendants,

Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,378,307	May 17, 1921	W. H. Young
2	1,484,445	Feb. 19, 1924	C. P. Dubbs
3	1,534,927	Apr. 21, 1925	do.
4	1,537,593	May 12, 1925	Gustav Egloff
5	1,602,990	Oct. 12, 1926	Robert T. Pollock
6	1,686,654	Oct. 9, 1928	C. P. Dubbs

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this thirtieth day of March, 1929, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2376 DISTRICT COURT OF THE UNITED STATES

District of Delaware.

(Stamp) Mail Room Apr 2 1930 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the eleventh day of April, 1930, in this court an action, suit, or proceeding No. 784 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,

Address Chicago, Illinois,

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, and Globe Oil and Refining Company, a corporation of Delaware, Defendants,

Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,378,307	May 17, 1921	W. H. Young
2	1,484,445	Feb. 19, 1924	Carbon P. Dubbs
3	1,534,927	Apr. 21, 1925	do.
4	1,537,593	May 12, 1925	Gustav Egloff
5	1,543,831	June 30, 1925	Carbon P. Dubbs
6	1,543,832	June 30, 1925	do.
7	1,602,990	Oct. 12, 1926	Robert T. Pollock
8	1,686,654	Oct. 9, 1928	Carbon P. Dubbs

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by .....(insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this nineteenth day of April, 1930, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

35

2377 DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the eleventh day of April, 1930, in this court an action, suit, or proceeding No. 785 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, and Skelly Oil Company, a corporation of Delaware, Defendants,
Address .....
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,378,307	May 17, 1921	W. H. Young
2	1,484,445	Feb. 19, 1924	Carbon P. Dubbs
3	1,534,927	Apr. 21, 1925	do.
4	1,537,593	May 12, 1925	Gustav Egloff
5	1,602,990	Oct. 12, 1926	Robert T. Pollock
6	1,686,654	Oct. 9, 1928	Carbon P. Dubbs

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by .....(insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed my hand this nineteenth day of April, 1930, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

36

2378 District Court of the United States

Southern District of Illinois.

(Stamp) Mail Room Jan 23 1931 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 11th day of April, 1930, in this court an action, suit, or proceeding No. 846 (Equity), entitled:
Name Universal Oil Products Co., Plaintiff,
Address Chicago, Illinois.

versus

Name Illinois Oil Co., Defendant,
Address Rock Island, Ill.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,484,445	Feb. 19, 1924	Carbon P. Dubbs
2	1,543,831	June 30, 1925	" "
3	1,543,832	" " "	" "
4	1,534,927	Apr. 21, 1925	" "
5	1,670,108	May 15, 1928	Gustav Egloff
6	1,686,654	Oct. 9, 1928	Carbon P. Dubbs

In the above-entitled case, on the 23rd day of June, 1930, the following patents have been included by amendment (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	1,537,593	May 12, 1925	Gustav Egloff
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 21st day of January, 1931, at Peoria, Ill.

S. T. Burnett,
Clerk of said Court.

37

2379 DISTRICT COURT OF THE UNITED STATES

Southern District of New York.

(Stamp) Mail Room Feb 19 1931 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 27th day of January, 1926, in this court an action, suit, or proceeding No. E 35-197, entitled:
Name Universal Oil Products Co., Plaintiff,
Address Chicago, Ill.

versus

Name Gasoline Products Co. and The M. W. Kellogg Co., Defendants,
Address New York, N. Y.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	see reverse side	
2	1,484,445		
3	1,488,325		
4	1,522,425		
5	1,517,830		
6	1,525,281		

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by.....(insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	1,534,927		
2	1,537,593		
3	1,535,725		
4	1,546,634		
5	1,550,568		
6	1,535,724		

In the above-entitled case the following decision has been rendered or decree issued:

Feb. 17, 1931—Filed Final decree dismissing Bill without cost. Bondy, J.

In Witness Whereof I have affixed my hand this 17th day of February, 1931, at New York, N. Y.

Charles Weiser,
Clerk of said Court.

see other side for patents

2380 DISTRICT COURT OF THE UNITED STATES

Northern District of Ohio,

Eastern Division.

(Stamp) Mail Room Oct 2 1931 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. .....), you are advised that there was filed on the 30th day of September, 1931, in this court an action, suit, or proceeding, No. 4018 Equity, entitled—
Name Universal Oil Products Company, Plaintiff
Address Chicago, Illinois

versus

Name National Refining Company, Defendant
Address Cleveland, Ohio
brought upon the following patents:

Patent No.	Date of Patent	Patentee
1,378,307	May 17th, 1921	W. H. Young
1,392,629	Oct. 4th, 1921	Carbon P. Dubbs
1,484,445	Feb. 19, 1924	Carbon P. Dubbs
1,534,927	Apr. 21, 1925	Carbon P. Dubbs
1,537,593	May 12, 1925	Gustav Egloff
1,543,831	June 30, 1925	Carbon P. Dubbs
1,543,832	June 30, 1925	Carbon P. Dubbs
1,602,990	Oct. 12, 1926	Robert T. Pollock
1,686,654	Oct. 9, 1928	Carbon P. Dubbs
1,764,296	June 17, 1930	Richard Fleming

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by .....(insert amendment, answer, cross bill, or other pleading).

Patent No.	Date of Patent	Patentee

In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof, I have affixed my hand this 30th day of September, 1931, at Cleveland, Ohio.

F. J. Denzler,
Clerk.

By O. W. Nelson,
Deputy Clerk.

39

2381 DISTRICT COURT OF THE UNITED STATES

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the eleventh day of April, A. D. 1930, in this court, an action, suit, or proceeding No. 784 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,

Address Chicago, Illinois

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, and Globe Oil and Refining Company, a corporation of Delaware, Defendants,

Address _____

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,378,307	May 17, 1921	W. H. Young
2	1,484,445	Feb. 19, 1924	Carbon P. Dubbs
3	1,534,927	Apr. 21, 1925	do.
4	1,537,593	May 12, 1925	Gustav Egloff
5	1,543,831	June 30, 1925	Carbon P. Dubbs
6	1,543,832	June 30, 1925	do.
7	1,602,990	Oct. 12, 1926	Robert T. Pollock
8	1,686,654	Oct. 9, 1928	Carbon P. Dubbs

In the above-entitled case, on the _____ day of _____, 193 , the following patents have been included by _____ (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

October 30, 1931. Consent decree, dismissing bill of complaint.

In Witness Whereof I have affixed my hand this sixteenth day of November, A. D. 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

40

2382 DISTRICT COURT OF THE UNITED STATES

Northern District of Illinois.

(Stamp) Mail Room Feb 13 1933 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 22nd day of July, 1931, in this court an action, suit, or proceeding No. 10,744, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name Winkler-Koch Engineering Co. et al., Defendant,
Address Wichita, Kansas.

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,367,307	May 17, 1921	W. H. Young
2	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
3	1,484,445	Feb. 19, 1924	C. P. Dubbs
	1,534,927	Apr. 21, 1925	C. P. Dubbs
4	1,537,593	May 12, 1925	Gustav Egloff
	1,543,831	June 30, 1925	Carbon P. Dubbs
5	1,543,832	June 30, 1925	Carbon P. Dubbs
	1,602,990	Oct. 12, 1926	Robert T. Pollock
	1,686,654	Oct. 9, 1928	C. P. Dubbs
	1,764,296	June 17, 1930	Richard Fleming

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by .....(insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 1st day of September, 1932, at Chicago, Illinois.

Charles M. Bates,
Clerk of said Court.

2383 District Court of the United States

District of Delaware.

(Stamp) Mail Room Mar 29 1933 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the ninth day of March, 1933, in this court an action, suit, or proceeding No. 1019 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Octane Oil Refining Company, a corporation of Delaware, Defendant,
Address .....
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	1,890,974	Dec. 13, 1932	Carbon P. Dubbs
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by.....(insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this eighteenth day of March, 1933, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

42

2384 District Court of the United States

District of Delaware.

(Stamp) Mail Room May 25 1934 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 11th day of March, 1929, in this court an action, suit, or proceeding No. 716 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,

Address Chicago, Illinois,

versus

Name Winkler-Koch Engineering Company, a corporation of Kansas, Wichita, Kansas, and Root Refining Company, a corporation of Delaware, Defendants,

Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,378,307	May 17, 1921	W. H. Young
2	1,484,445	Feb. 19, 1924	C. P. Dubbs
3	1,534,927	Apr. 21, 1925	do.
4	1,537,593	May 12, 1925	Gustav Egloff
5	1,602,990	Oct. 12, 1926	Robert T. Pollock
6	1,686,654	Oct. 9, 1928	C. P. Dubbs

In the above-entitled case, on the 21st day of June, 1932, the following patents have been excluded by amendment to bill (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	1,378,307	May 17, 1921	W. H. Young
2	1,484,445	Feb. 19, 1924	C. P. Dubbs
3	1,534,927	Apr. 21, 1925	do.
4	1,602,990	Oct. 12, 1926	Robert T. Pollock
5	1,686,654	Oct. 9, 1928	C. P. Dubbs

In the above-entitled case the following decision has been rendered or decree issued:

May 18, 1934. Interlocutory decree adjudging U. S. Patent No. 1,537,593 valid and infringed, etc.

In Witness Whereof I have affixed my hand this twenty-fourth day of May, 1934, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

2385 DISTRICT COURT OF THE UNITED STATES

District of Kansas.

(Stamp) Mail Room Jul 28 1933 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 25th day of July, 1934, in this court an action, suit, or proceeding No. 819-N, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name ElDorado Refining Company, Defendant,
Address ElDorado, Kansas.

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by .....(insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 25th day of July, 1934, at Wichita, Kansas.

W. G. West,
Clerk of said Court.
By Ruth Williams,
Deputy.

44

2386 DISTRICT COURT OF THE UNITED STATES,

District of Kansas, Second Division.

(Stamp) Mail Room Jul 28 1934 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 25th day of July, 1934, in this court an action, suit or proceeding No. 820-N, entitled:
Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois,
versus
Name Kanotex Refining Company, Defendant,
Address Arkansas City, Kansas,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3			
4			
5			

In the above-entitled case, on the ..... day of ....., 192..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 25th day of July, 1934, at Wichita, Kansas.

W. G. West,
Clerk of said Court.
By Ruth Williams,
Deputy.

45

2387 DISTRICT COURT OF THE UNITED STATES,

District of Kansas, Second Division.

(Stamp) Mail Room Jul 28 1934 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 25th day of July, 1934, in this court an action, suit or proceeding No. 821-N, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois,

versus

Name Globe Oil & Refining Company, Defendant,
Address McPherson, Kansas,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3			
4			
5			

In the above-entitled case, on the ..... day of ....., 192..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 25th day of July, 1934, at Wichita, Kansas.

W. G. West,
Clerk of said Court.
By Ruth Williams,
Deputy.

2388 DISTRICT COURT OF THE UNITED STATES,

District of Kansas, Second Division.

(Stamp) Mail Room Jul 28 1934 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.
Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 25th day of July, 1934, in this court an action, suit or proceeding No. 822-N, entitled:
Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois,
versus
Name Dickey Refining Company, Defendant,
Address McPherson, Kansas,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3			
4			
5			

In the above-entitled case, on the ..... day of ....., 192..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 25th day of July, 1934, at Wichita, Kansas.

W. G. West,
Clerk of said Court.
By Ruth Williams,
Deputy.

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2389 DISTRICT COURT OF THE UNITED STATES,

Western District of Oklahoma.

(Stamp) Mail Room Aug 27 1934 U. S. Patent Office.
Honorable Commissioner of Patents,
Washington, D. C.
Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 23rd day of August, 1934, in this court an action, suit, or proceeding No. 1645—Equity, entitled:
Name Universal Oil Products Company, a Corporation, Plaintiff,
Address Chicago, Ill.,

versus

Name Anderson-Prichard Oil Corporation, Defendant,
Address Oklahoma City, Oklahoma,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,488,325	Mar. 25, 1924	Carbon P. Dubbs
3	1,537,593	May 12, 1925	Gustav Egloff
4	1,890,974	Dec. 13, 1932	Carbon P. Dubbs
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192...., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 23rd day of August, 1934, at Oklahoma City, Oklahoma.

Theodore M. Filson,
Clerk of said Court.
By Glenn H. Grubb,
Deputy.

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2390 CIRCUIT COURT OF APPEALS OF THE UNITED STATES

For the Third Circuit

(Stamp) Mail Room Oct 29 1934 U. S. Patent Office

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 12th day of July, 1934, in this court an action, suit, or proceeding No. 5546, entitled:

Name Root Refining Co., Defendant Appellant,
Address Delaware,

versus

Name Universal Oil Products Co., Plaintiff Appellee,
Address Chicago, Ill.,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,537,593	May 12, 1925	Gustav Egloff
2			
3			
4			
5			

In the above-entitled case, on the 16th day of May, 1933, the following patents have been included by Answer (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patept	Patentee
1	954,575	Apr. 12, 1910	Lang
2	1,288,711	Dec. 24, 1918	Sherman
3	1,324,983	Dec. 16, 1919	Rosenbaum
4	1,619,921	Mar. 8, 1927	Egloff
5	1,740,691	Dec. 24, 1929	Greenstreet

In the above-entitled case the following decision has been rendered or decree issued:

Not argued in this Court as yet.

In Witness Whereof I have affixed my hand this 27th day of Oct., 1934, at Phila.

John P. Kelly,
Deputy Clerk of said Court.

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PX 501

1669

2391 District Court of the United States

Northern District of Ohio,

Eastern Division

(Stamp) Mail Room Nov 6 1934 U. S. Patent Office

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L.), you are advised that there was filed on the day of 193 , in this court an action, suit or proceeding, No. 6016 Equity entitled

Name Universal Oil Products Company, Plaintiff
Address Chicago, Ill.

versus

Name National Refining Company, Defendant
Address Cleveland, Ohio,

brought upon the following patents

Patent No.	Date of Patent	Patentee
1,[illegible],[illegible]	May 17 19[illegible]	W. M. Young
1,[illegible],[illegible]	Oct. 6 1931	Gasline F. Fenske
1,[illegible],[illegible]	Feb. 23 1932	Gasline F. Fenske
1,[illegible],[illegible]	Aug. 23 1932	Gasline F. Fenske
1,[illegible],[illegible]	May 17 1932	Charles Ellis
1,[illegible],[illegible]	June 28 1932	Gasline F. Fenske
1,[illegible],[illegible]	June 28 1932	Gasline F. Fenske
1,[illegible],[illegible]	Oct. 11 1932	Richard T. Holt
1,[illegible],[illegible]	Jan. 3 1933	Gasline F. Fenske
1,[illegible],[illegible]	June 27 1933	Richard T. Young

In the above entitled cause on the day of 193 the following patents have been included by amendment

Patent No. Date of Patent Patentee

In the above-entitled case the following decision has been rendered or decree issued:

11/7/34—Order that all patents in plaintiff's Bill of Complaint, except patents Nos. 1,392,629 and 1,537,593 be dismissed without prejudice filed & ent. Jones, J.

In Witness Whereof, I have affixed my hand this 7th day of November, 1934, at Cleveland, Ohio.

F. J. Denzler,
Clerk.
By O. M. Nelson,
O. M. Nelson,
Deputy Clerk.

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2392 District Court of the United States,

Northern District of Ohio,

Eastern Division.

(Stamp) Mail Room Nov 8 1934 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. .....), you are advised that there was filed on the 30th day of September, 1931, in this court an action, suit, or proceeding, No. 4018, entitled:

Name Universal Oil Products Company, Plaintiff,
Address Chicago, Ill.,

versus

Name National Refining Company, Defendant,
Address Cleveland, Ohio,
brought upon the following patents:

Patent No.	Date of Patent	Patentee
1,378,307	May 17, 1921	W. H. Young
1,392,629	Oct. 4, 1921	Carbon P. Dubbs
1,484,445	Feb. 19, 1924	Carbon P. Dubbs
1,534,927	Apr. 21, 1925	Carbon P. Dubbs
1,537,593	May 12, 1925	Gustav Egloff
1,543,831	June 30, 1925	Carbon P. Dubbs
1,543,832	June 30, 1925	Carbon P. Dubbs
1,602,990	Oct. 12, 1926	Robert T. Pollock
1,686,654	Oct. 9, 1928	Carbon P. Dubbs
1,764,296	June 17, 1930	Richard Fleming

In the above-entitled case the following decision has been rendered or decree issued:

2/26/35—Order overruling exceptions to Master's report; case dismissed without prejudice at Plaintiff's costs, filed & ent. Jones, J.

In Witness Whereof, I have affixed my hand this 3/7/35 day of ....., 193..., at Cleveland, Ohio.

F. J. Denzler,
Clerk.

By Warner B. Ragatz,
Warner B. Ragatz,
Deputy Clerk.

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2393 District Court of the United States,

Southern District of California.

(Stamp) Mail Division Mar 18.35 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 12th day of March, 1935, in this court an action, suit, or proceeding No. Eq. 568-J, entitled:

Name Universal Oil Products Company, a corpn. (So. Dakota), Plaintiff,
Address Chicago, Ill.,

versus

Name Hancock Oil Company, a corpn., (Calif.), Defendant,
Address Long Beach, Calif.,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,488,325	Mar. 25, 1924	Carbon P. Dubbs
3	1,537,593	May 12, 1925	Gustav Egloff
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192..., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
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In the above-entitled case the following decision has been rendered or decree issued:

In Witness Whereof I have affixed my hand this 14th day of March, 1935, at Los Angeles, California.

R. S. Zimmerman,
Clerk of said Court.
By Murray E. Wire,
Murray E. Wire,
Deputy Clerk.

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2394 District Court of the United States,

District of Kansas, Third Division.

(Stamp) Mail Division Apr 10 35 U. S. Patent Office.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 1st day of April, 1935, in this court an action, suit, or proceeding No. 449-N, entitled:
Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois,

versus

Name National Refining Company, Defendant,
Address Coffeyville, Kansas,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	1,890,974	Dec. 13, 1932	Carbon P. Dubbs
4			
5			

In the above-entitled case, on the _____ day of _____, 192 _, the following patents have been included by _____ (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

_____

_____

In Witness Whereof I have affixed my hand this 8th day of April, 1935, at Topeka, Kansas.

W. G. West,
Clerk of said Court.

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2395 IN THE UNITED STATES CIRCUIT COURT OF APPEALS,
For the Third Circuit.

No. 5546. October Term, 1934.

Root Refining Company,
Defendant-Appellant,

vs.

Universal Oil Products Company,
Plaintiff-Appellee.

No. 5648. October Term, 1934.

Root Refining Company,
Defendant-Appellant,

vs.

Universal Oil Products Company,
Plaintiff-Appellee.

Appeals from the District Court of the United States, for the District of Delaware.

OPINION.
(Filed June 26, 1935.)

Before BUFFINGTON, DAVIS and THOMPSON, *Circuit Judges.*

DAVIS, *Circuit Judge.*

These suits were brought against the Root Refining Company by the Universal Oil Products Company, 54
2396 hereinafter called plaintiff, for the infringement of all the nine claims, except the 6th, of United States letters patent No. 1,392,629 issued to Carbon P. Dubbs,

October 4, 1921 and by him assigned to the plaintiff, and all five claims of United States letters patent No. 1,537,593 issued to Gustav Egloff, May 12, 1925. Each patent is for a process for the manufacture of gasoline from petroleum. The Root Refining Company defended on the ground that both patents were invalid, the Dubbs patent for lack of disclosure and the Egloff patent for lack of utility, and both for lack of novelty over the prior art. All the claims in issue were held to be valid and infringed by the learned District Judge. The two suits were consolidated for trial and will be disposed of in a single opinion here as they were below.

The Root Refining Company, hereinafter called defendant, is a Delaware corporation and the plaintiff is a corporation of South Dakota.

Both patents relate to improvements in the process of cracking petroleum for making gasoline. Petroleum in its natural state, as it comes from the earth, is made up of many combinations of hydrogen and carbon. The natural constituents of these combinations are classified according to their specific gravity or boiling points. Cracking involves the decomposition of these complex hydrocarbon molecules of petroleum by the application of heat and pressure. It breaks up the heavier constituent elements and converts them into lighter oils as incondensible gases, gasoline, kerosene, gas oil and fuel oil. As the heavy hydrocarbon compounds composing the oil to be refined are broken down, new ones are formed. Some of these contain a great number of valuable hydrogen elements while others contain more carbon compounds which have little or no value.

Cracking, as distinguished from distillation, which involves the mere physical separation of the elements of

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2397 the oil, involves a chemical reaction. This is produced by the application of intense heat, 700° to 850° F. and upward, for a sufficient length of time to break up the molecules. The art of cracking is of great advantage for it is said to save more than five hundred million barrels of oil yearly.

The historical development of cracking oil to the state of the art where Trumble left it was admirably set forth by Judge Woolley in the case of *Skelly Oil Co.* v. *Universal Oil Products Co.*, 31 Fed. (2d) 427. What Trumble did was to take a typical cycle system, well known in the

art, and "disclose a practice and suggest a means continuously to draw off a small portion of the revolving residuum (loaded with the objectionable matter) in each of its cycles through the closed system and replenish the bulk with an equal amount of new oil stock and thereby maintain the bulk constant in volume." This was held to be "something abruptly different from what existed before" and utility being evident, the patent was held to be inventive and valid.

There are two real questions involved here: (1) The validity of the claims, and (2) their infringement, if valid. Validity depends upon whether or not Dubbs and Egloff made any inventive advance in, or contribution to, the art over Trumble. If they did, what was it?

The refining industry according to the plaintiff recognizes three types of cracking process: 1. The liquid phase, all the oil undergoing treatment being in a liquid condition in the zone where heating and cracking take place, 2. the liquid vapor or mixed phase, and, 3, the vapor phase, all the oil being converted into vapor before it reaches the heating and cracking zone.

The Dubbs patent practices the mixed phase process, in which all the heating is done in the heating or crack-

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2398 ing coils. In the process of refining oil, carbon rapidly accumulates in large quantities upon the heating tubes of the still and causes serious difficulties and great expense. In the development of the art, carbon which thus formed on the inner walls of the heating tubes increased their temperature to such a degree that it became necessary to shut down the plant frequently in order to remove the carbon and to prevent the tubes from bursting. A still under the old Burton-Clark system, the best before Trumble, could not be operated for more than 36 hours before it had to be shut down. It required about the same length of time to clean the tubes, because many of them are in the furnace and are quite long, before another run could be started. After the still had been closed down and cleaned a considerable length of time was required to heat the tubes again to a temperature sufficient for cracking.

The Trumble patent greatly increased the length of the run by removing part of the residue from which the vapor had been separated so that that part of the residue was never again returned to the cracking coil

or tubes. This increased the run from 36 hours to 17 days.

In Dubbs' process the oil to be refined enters the still through a pump J in Fig. 2 and is forced into the "cracking tubes B" where it is heated to the proper temperature, the maximum which it ever attains in the system. It is then discharged into "vaporizing tubes C" which are only partially filled with oil and as the oil is passing through these tubes, the cracking reaction is completed and the vapors formed therein as well as the vapors generated in the B tubes, separate themselves from the liquid oil and pass up through tubes D and E to the partial condenser, called a "header" G, thence to the aerial condenser G′, and through the pipe G^2 to the final or water

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2399 condenser G^3, whence it is discharged throught the pressure-regulating valve H. The condensate from the partial condenser G and G′, large in amount and uncontaminated by the residue left in the vaporizing tubes, while still at a heated temperature, is discharged through pipes F F′ into the fresh feed line and this mixture composed of reflux and fresh feed under pressure of the high pressure pump J is forced into the entrance of the cracking tubes B. The distillate from the final condenser G^3 is the desired product of the process. All the residue left in the tubes C from which the vapor has been separated is drawn off through the line K and the pressure regulating valve H′, and is never again returned to the system.

Two things distinguish Dubbs from Trumble: 1. Dubbs returns a large amount of reflux uncontaminated, from the partial condensers G and G′ to the entrance end of the cracking tubes, admixed with a charge of fresh oil. 2. He removes all of the residuum left in the vaporizing tubes so that none of it ever again enters into the system. He thus secures what the patent calls a continuous "clean circulation", free from carbon-producing residuum. Because Trumble removes only some of the residuum he does not secure a "clean circulation". This is admitted by counsel for appellant as a distinguishing feature between Trumble and Dubbs. He says that "a comparison between the Dubbs and Trumble operations shows that whereas Trumble withdraws a portion of the residuum, Dubbs withdraws all of it". Trumble thus circulates the residuum through the heating tubes over and over again, but Dubbs prevented the return to the cracking coils of

any of the carbon which had been freed and also any of the "asphaltines" which are present in the oil which has once been subjected to cracking temperature, but not vaporized, and these, when again subjected to cracking tem-

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2400 perature, rapidly turn into carbon and settle on the cracking tubes. "Trumble returned dirty and Dubbs clean reflux for cracking. This is the difference", said Judge Nields in his comprehensive opinion.

This forward step by Dubbs though simple as we look back upon it, produced astounding results.

The maximum length of run under the Trumble process, using gas oil as a charging stock, was 17 days. The average run under the Dubbs process using fuel oil, a poorer grade of oil, was 25 to 40 days. The gasoline yield using the Trumble process was 28% to 30%; under the Dubbs process the yield was 47% to 52%.

These advantages were so great and unmistakable that the whole industry immediately recognized them. The Royal Dutch Shell interests which owned the Trumble patent immediately took out a license under Dubbs and paid in royalties over $12,000,000 and later in 1930, with the Standard Oil Company of California, which spent $5,000,000 in experimental work trying to solve the problem, purchased all of the stock of the plaintiff company which owns the Dubbs patent, for $25,000,000. The licensed users of the process expended over $50,000,000 in apparatus for practicing it and paid appellees in royalties in a period of seven years, a sum in excess of $33,500,000. It is improbable that shrewd and experienced businessmen, doubtless guided by able and competent counsel, would have paid such a price for an invalid patent.

Trumble was a distinct advance over the Burton-Clark process. We held that the Skelly Company infringed the Trumble process because it returned a dirty reflux and drew off only a part of the residuum which had once gone through the cracking tubes without being vaporized, but it did not infringe the Dubbs process because it did not

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2401 return a clean reflux and did not draw off all the residuum. The Skelly Company could not have been sued at that time under the Dubbs patent, for it was not infringed. The Skelly Company followed the teaching of the Trumble patent and not that of Dubbs. Consequently

that suit was confined to the Trumble patent. The advance of Trumble over Burton-Clark and the prior art was pointed out and emphasized in the Skelly Oil suit. It was brought out in that suit that the Trumble patent had been owned by the Dutch Shell Company and had been transferred to the plaintiff Company, and that the Dutch Shell Company was then using the Dubbs process.

Does this apparently simple step forward taken by Dubbs constitute invention?

The efforts of the industry to avoid carbon in order to secure a longer run and the immediate adoption of the Dubbs process by practically the entire industry is conclusive evidence that Dubbs discovered what the industry had long been looking for, with only partial success in Trumble. It was an important step in advance of anything which had ever been done in the prior art. As Judge Nields aptly said, "a consideration of the prior art resolves itself into the question whether Dubbs discloses patentable novelty over Trumble and Burton-Clark". In the Skelly Oil case, supra, we passed upon the prior art up to and including Trumble. Of the five patents, Hall, Greenstreet, Alexander, Pielsticker and Trumble, cited against Dubbs, the first three were pure paper patents, did not anticipate Dubbs, and had no effect whatever upon the industry which was earnestly seeking a solution to its problem of eliminating carbon and other deleterious substances. The words of Judge Buffington in the case of *Hartford-Empire Co.* v. *Hazel-Atlas Glass Co.*, 59 Fed. (2d) 399, are a good and sufficient commentary on these patents:

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2402 "Where an art, eager for relief, found in these moribund patents nothing to meet that suggested solution, it is safer to rely evidentially on the then judgment, attitude, and conduct of the glass trade rather than on the post litem testimony of experts, the contentions of infringers, and the theoretical construction that often tempts courts to create out of lifeless patents an imaginary machine on paper which a working art could not do in steel."

The British Pielsticker patent with which the United States Pielsticker patent is substantially identical, belongs to the last century (1891) and although it has always been available ever since it was granted, the District Court said that, "no one used it because it was useless".

It appears to have been primarily intended for use in simple distillation of hydrocarbons and "fats and oils and the separation of fatty acids and glycerin". It also seems to have been intended for use in the distillation of water from sea water and alkaline solutions. Judge Nields said, "there is uncertainty as to what it discloses". It did not anticipate Trumble. It cannot by any interpretation short of mere inference, anticipate Dubbs. From 1891 to 1921, the date of the issue of the Dubbs patent, a period of thirty years, nobody, not even the defendant itself, (which paid royalties to plaintiff for five years, 1925 to 1930) thought that Pielsticker solved the problem of the industry or that he disclosed the process of Dubbs, and the change of mind of the defendant is not based upon disclosures, but upon inferences drawn from disclosure. What Judge Woolley said in the Skelly Oil case, supra, applies here:

> "Inferences as distinguished from disclosures, especially when drawn in the light of after events, cannot
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>
> 2403 be accepted as a basis of anticipation. A patent relied upon as an anticipation must itself speak. Its specification must give in substance the same knowledge and the same direction as the specification of the patent in suit. It is not enough to prove that a method or apparatus described in an earlier specification can be made to produce this or that result."

This well describes the position of the defendant in the case at bar. Knowledge after the event is always easy and problems once solved present no difficulties. Expert witnesses glibly testify that the new thing for which the world has been striving was always at hand and so easy of discovery that it required the merest mechanical skill to discover or produce it. But the law requires other tests of invention than subtle conjectures of what might have been discovered and yet was not. It regards a change as evidence of novelty. Degrees of change, dividing inventions into primary and secondary, give a proportionate dominion to a patent. A patentable invention may be the successor of all that went before and only a step beyond the prior art in the march of improvement. *Diamond Rubber Co.* v. *Consolidated Rubber Tire Co.*, 220 U. S. 428.

In the *Barbed Wire Patent Case*, 143 U. S. 275, the court said:

> "Under such circumstances courts have not been

reluctant to sustain a patent to the man who has taken the final step which has turned a failure into a success. In the law of patents it is the last step that wins. It may be strange that, considering the important results obtained by Kelly in his patent, it did not occur to him to substitute a coiled wire in place of the diamond shape prong, but evidently it did not; and to the man to whom it did ought not to be denied the quality of inventor. There are many .62

2404 instances in the reported decisions of this court where a monopoly has been sustained in favor of the last of a series of inventors, all of whom were groping to attain a certain result, which only the last one of the number seemed able to grasp."

In *Eibel Process Co.* v. *Minnesota and Ontario Paper Co.*, 261 U. S. 45, Eibel changed the machine only in the elevation of the breast roll and wire to produce a certain pitch or angle of the wire in relation to the horizontal. This change increased the speed of the wire from 500 to 600 feet a minute and produced a better paper. Chief Justice Taft in sustaining the patent said:

> "In administering the patent law the court first looks into the art to find what the real merit of the alleged discovery or invention is and whether it has advanced the art substantially. If it has done so, then the court is liberal in its construction of the patent to secure to the inventor the reward he deserves."

What Dubbs did now seems simple and just what any one skilled in the art would have done. "This, however, is but the common history of many important inventions, the simplicity of which seems to the ordinary observer to preclude the possibility of their involving an exercise of the inventive faculty." *Carnegie Steel Co.* v. *Cambria Iron Co.* 185 U. S. 403. "It is often difficult to determine what is a mere mechanical advance, or the result of the exercise of creative faculty amounting to a meritorious invention. The fact that the invention seems simple after it is made does not determine the question; If this were the rule many of the most beneficial patents would be stricken down." *Expanded Metal Co.* v. *Bradford*, 214 U. S. 366.

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2405 It may seem strange that Trumble, who went part of the way, did not go all the way and secure a "clean circulation" by returning uncontaminated reflux mixed with fresh oil to the entrance of the cracking tubes and by removing all of the residuum from the vaporizing tubes, but he did not and in consequence failed to obtain the wonderful results of Dubbs. It is, however, not surprising for the industry was spending millions of dollars to obtain that result and Dubbs alone did it.

When the principles declared in the above and many other cases, are applied to the evidence in this case, the conclusion is irresistible that Dubbs made an important and novel disclosure which has been of great commercial use.

The Egloff patent, like the Dubbs patent, seeks by its process and apparatus to eliminate as far as possible the evils produced by carbon in the process of cracking oil. Claim 5, which is typical, is as follows:

> "A process of oil conversion, consisting in maintaining a body of heated hydrocarbons in an enlarged zone where substantial vaporization occurs, in subjecting the vapors to reflux condensation to condense the heavier vapors, in passing the reflux condensate in an advancing stream through a heating zone where it is subjected to cracking conditions of temperature and pressure, in delivering heated condensate to said enlarged zone, and simultaneously heating an independent stream of charging oil for delivery to said enlarged zone to a temperature sufficient to cause a substantial vaporization thereof in said zone, in introducing said heated charging oil to the enlarged zone, and in withdrawing unvaporized oil from said enlarged zone without permitting the same to again enter either of said oil streams."

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2406 The apparatus contains two heating coils, designated 5 and 6, in the single figure of the patent, heated to different temperatures, and many pipes suitable for the operation of the process. In this process oil is forced into pipe 7 on the inlet side of coil 5 by the pump, 8, and when heated sufficiently to produce mild cracking, it passes through the transfer pipe 9 into chamber 12 where all the cracking is completed and vapor liberation occurs. The residue left from this liberation is discharged through the drawoff pipe 17 and is not again recirculated

through the system. The liberated vapors pass through the pipe 19 into the dephlegmator where they are partially condensed. Those which are not condensed pass out through pipe 27 to the condenser 29 and finally into the receiver 33, from which the residue is drawn off through pipe 36. The reflux from the dephlegmator passes through pipe 23 which is connected with pipe 25 and through pipe 26 into coil 6. The oil is there heated to a higher temperature than in coil 5 and is then discharged through pipe 14 into pipe 9 where it mixes with the oil from coil 5 and this mixture is conveyed to chamber 13 and the process continues as before.

Judge Nields tersely summed up the Egloff patent as follows:

> "The Egloff process was designed to further mitigate the carbon evil in connection with cracking of heavy oils. This process utilizes the salient features of the Dubbs patent. It provides a preliminary screening action for removing from the system the free carbon and heavy polymers which rapidly snowball to coke."

Does the defendant infringe the Dubbs or Egloff process? Defendant's process is set forth in plate VIII in its brief and starts with the reflux line. Oil is conducted through this line and the reflux pump into furnace No. 2 where

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2407 the temperature is raised to 900° F. under a pressure of 500 lbs. and 92% of the cracking takes place. In this furnace under heat and pressure vapors are produced—defendant calls this production "vaporization", while plaintiff calls it "generation". The oil in the form of a foamy mass leaves this furnace through a transfer line leading from the furnace to the "vapor separator" which corresponds to the C tubes of Dubbs. Before the heated oil enters the vapor separator the pressure is reduced to 29 lbs. through the pressure reduction valve in the line. Before the hydrocarbons enter the separator they are met by and mixed with a stream of "topped crude oil" raised to a temperature of 798° F. under an outlet pressure of 92 lbs. This mixed stream of oil from furnaces Nos. 1 and 2 enters the vapor separator and vaporization or vapor liberation takes place, just as it does in the C tubes of the Dubbs patent. The generated vapor goes off through the "vapor line" at the top to the "fractioning tower" and the residuum is drawn off at the bot-

tom of the separator. From the top of the fractioning tower the product is removed and condensed and from the bottom the condensed vapors are returned as reflux to furnace No. 2, and the process continues as before.

All this is practically just what takes place in the Dubbs process described above and any differences that exist are so slight that they are immaterial and do not affect the principle disclosed by Dubbs. But the defendant seeks to avoid the apparent conclusion as to infringement by an untenable construction of the words "without substantial vaporization" in the B tubes, found in one form or another (such as "but substantial vaporization prevented" or "while preventing substantial vaporization") in all of the claims of the Dubbs patent.

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2408 Claim 1, regarded as typical, reads as follows:

"1. A process of converting relatively heavy into lighter hydrocarbons, consisting in passing a stream of oil through a zone where the oil is heated to a cracking temperature but without substantial vaporization, passed thence to and through a zone where vaporization takes place, removing the vapors, subjecting them to reflux condensation, returning reflux condensate, for further cracking, removing the residue, after said vaporization, from the system without permitting intermingling of any substantial portion thereof with the oil in the heating zone and maintaining a pressure upon the material during distillation."

The process has, as above stated, for its object the conversion of relatively heavy into lighter hydrocarbons by passing a stream of oil through the B tubes, where the oil is heated to a cracking temperature, but "without substantial vaporization". The oil then passes from these tubes to the C tubes where vaporization occurs. A great deal of testimony was taken as to what takes place in practicing the process of both the defendant and Dubbs. Defendant says that the construction of the phrase "without substantial vaporization" is a matter of vital and, so far as infringement goes, controlling importance."

This is of importance as bearing upon the question of infringement for the reason that Dubbs says that the oil is heated to a cracking temperature in the B tubes, but "without substantial vaporization", while defendant says that

in its operation 50% to 58% of the hydrcarbons are vaporized before leavang the cracking coil, or B tubes. If both parties mean the same thing by "vaporization", evidently the defendant does not infringe if the facts as to what occurs in the B tubes are correctly stated on both sides.

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2409 However, there is, as we see it, no room for dispute as to what occurs in the tubes, either B or C. The difficulty arises over the terminology used to describe what takes place while the oil is passing through them.

Plaintiff says that the words, "without substantial vaporization", as used in the patent, mean, without substantial separation of the vapor from the liquid in the B tubes; that in the process of cracking, vapor is generated in the B tubes where there is formed a foaming mass of mixed liquid and vapor, but no "vaporization" occurs there in the sense that the vapor in any substantial quantity is liberated, or separated from the liquid and this mixture of vapor and liquid travels at great velocity toward the C tubes where the vapor is liberated from the liquid.

Dr. Warren K. Lewis, professor of chemical engineering at the Massachusetts Institute of Technology, testified for the plaintiff as follows:

"Q. 145. Doctor, is it proper to say that there is no substantial vaporization in the tubes B of the Dubbs patent in suit in practicing the process of that patent?

A. Yes, in my opinion.

Q. 146. Would there in those tubes be vapor generation?

A. Yes, a very considerable amount.

Q. 147. Would there in those tubes be both vapor generation any vapor liberation?

A. No, there would be vapor generation only.

* * * * *

Q. 150. And in the tubes C would there be vapor liberation?

A. Yes, all or at least substantially all of the vapor liberation occurring in the whole process occurs in tubes C. This is why they are called the vaporizing tubes.

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2410 The Court: That word "liberation" means separation of vapor from the liquid?

The Witness: Separation or segregation of vapor from the liquid. In my opinion that is the way it is used in the patent and I cannot read it any other way.

• • •

"There is a large amount of vapor formation in the B tubes of Dubbs. Granting his operation, it is inevitable. Clearly, therefore, Dubbs is distinguishing between vapor generation and vapor liberation. Vapor generation, in Dubbs' mind, in my opinion, is the formation of vapor from the liquid, which is not accompanied by separation or segregation or liberation of that vapor from the liquid, resulting in its removal from contact with the liquid. In other words, I have referred to the physical condition of the liquid-vapor mixture, rushing and tearing through these B tubes, a spray, a froth, a spit, a foam. Vapor generation? Yes. Vapor liberation? No. • • •

"The process disclosed and described in this patent (the Dubbs patent in suit) is • • • characterized first by the fact that no segregation or separation of liquid from vapor is to be allowed to occur in the heating zone. • • •

In the fourth place, it provides that there shall be no liberation of vapors in these tubes; that any vapors generated in these tubes shall travel through these tubes, commingled with the liquid in them in the form of a froth or a spray or intimate mixture without any separation or segregation or liberation of the vapors from the liquid."

Dubbs, in his patent recognized the difference between the generation and the liberation of vapors. He distinguished between the cracking and vaporizing tubes. When

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2411 used the word "vaporization" he did not mean the "generation" but the "liberation of vapor". He said: "B are the cracking tubes. C are the vaporizing tubes. D are the vapor tubes connected with the vaporizing tubes C." In his specification, he says:

"Describing the operation of the process, the mate-

rial to be treated is drawn from any suitable source by means of the pump J and discharge therefrom through line J^1 into and through tubes B and during the time they are passing through said tubes, they are subjected to sufficient heat to cause the desired amount of cracking. Said oil is then passed into the tubes C which are only partially filled with the oil and as the oil passes through these tubes, there is a liberation of vapors from same and which vapors pass up through the vapor tubes D, E and into header G and through aerial condenser G^1, through line G^2, through water condenser G^3 and discharged through pressure regulating valve H."

The art well knew that the cracking of oil by heat generates vapor in the B tubes, but pressure keeps it from separating from the liquid, and both the vapor and the liquid as a mixture rush on with great velocity into the C tubes which are only partially filled with the liquid and the pressure being released, the vapors separate from the liquid and thus vaporization, liberation of vapor, takes place. Or, in the words of the patentee, oil is "continuously supplied to the pump J and thence to the 4 inch coils B which are subjected to a temperature of 750° to 86°. F. The heated oil then passes to the 10 inch coils C which are maintained about half full of oil and wherein vaporization takes place. The residue is constantly drawn off through the pipe K to a suitable storage. The vapors pass up

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2412 through the line D to the pipe E into the manifold G and from thence into the aerial condenser G^1 where the heavier distillates are condensed and the lighter distillates pass on to the water cooled condenser G^3." It is evident that when the patentee said that the oil was heated to a cracking temperature in the B tubes, but "without substantial vaporization", he meant without substantial liberation of the vapor, for he says on page 2, lines 40-43, when the mixture enters the half-filled C tubes "vaporization" takes place. This word as here used means "liberation" of the generated vapor from the liquid, for after "vaporization" takes place in the C tubes, he says that the vapors pass up through the lines D to the pipe E etc. On page 1, lines 78-84, in describing the process, he says: "Said oil is then passed into the tubes C which are only partially filled with the oil and as the oil passes through these tubes,

there is a liberation of vapors from same and which vapors pass up through the vapor tubes D, E and into the header G." He thus defines "vaporization" by the words "liberation of vapors". It is in this sense that "vaporization" is used in the claims.

Counsel for defendant, in describing what takes place in his process in furnace No. 2, which, as before stated, corresponds to the B tubes of Dubbs, says:

> "This reflux is conducted to the reflux pump, shown at the bottom of the drawing, from whence it passes to furnace No. 2. In his furnace 92% of the cracking of the system takes place. The oil courses through a coil having a serial length of thirty-four hundred and fifty feet. It is there raised to a temperature of 900° F. under a pressure of 500 lbs. As cracking proceeds, substantial vaporization occurs to the extent of 50% to 58%. The hydrocarbons in this oil are converted into a foamy mass of mixed liquid and vapor traveling
>
> 71
>
> 2413 at a high velocity. As vaporization increases the velocity also increases owing to the expansion of the vapors. As the liquid and vapors are churned and mixed together in the form of a foamy mass, there is no possibility of separation of the one from the other. The hydrocarbons in the form of a foamy mass leave furnace No. 2 through the transfer line leading to the vapor separator. Before their entrance therein pressure is reduced to 29 lbs. through the pressure reduction valve in the line."

On page 9 of its reply brief defendant says:

> "The art consequently appreciated that when oil was heated in the coil, (B tubes of Dubbs and furnace No. 2 of defendant) vaporization—that is, vapor generation—would occur unless sufficient pressure were used to prevent such vaporization."

Vaporization in these quotations means vapor generation.

In the last sentence of his reply brief, defendant again says: "Vapors form and multiply in defendant's coil and the conditions are such that there is no possibility of vapor liberation at any time."

On page 21 of his main brief counsel for defendant says:

> "The physical condition of the on-rushing stream of

oil in these tubes (the B tubes of the Dubbs patent) would be such as to preclude the possibility of a condition where a tranquil liquid level could exist from which vapors might be separated and liberated from the liquid. * * * On the other hand, in the ten-inch C tubes of the patent, the velocity of the stream is greatly decreased. These C tubes are only partially

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2414 filled thereby providing a liquid level from which vapors generated in the cracking operation are released and escape through the vapor lines D of the patent and through the vapor line from the top of the reaction chamber in the commercial operation."

Again, at the bottom of page 91 of defendant's main brief, it is said:

"In view of the rapid velocity of the oil in the B tubes, liberation of vapors therein could certainly not exist at all, either substantially or unsubstantially."

Defendant's expert, Dr. Rittman, testified to the same effect:

"XQ. 862. In that vapor separator is there liberation of vapor from liquid?

A. There is separation of vapor from liquid.

XQ. 863. And is there liberation?

A. Please define the word liberation as you mean it and I will try to answer it.

XQ. 864. By liberation I would refer to the passage of vapors beyond the liquid, the vapors going on and leaving the liquid, and the liquid either remains where it is or is drawn out of the chamber where the liberation takes place.

A. Therefore, I understand your term vapor liberation to be the same as my vapor seperation and in that sense I would say there is vapor liberation."

The words of the Supreme Court in the case of *Smith* v. *Snow*, decided January 7, 1935, forcibly apply to the question of infringement in this case:

"If the matter were doubtful, it is plain from what has been said that the character of the patent and its commercial and practical success are such as to en-

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2415 title the inventor to broad claims and to a liberal

construction of those which he has made. *Morley Machine Co.* v. *Lancaster*, 129 U. S. 273, 277; *Eibel Co.* v. *Paper Company*, 261 U. S. 45, 63; *Winans* v. *Denmead*, *supra*, 341. In such circumstances, if the claim were fairly susceptible of two constructions, that should be adopted which will secure to the patentee his actual invention, rather than to adopt a construction fatal to the grant, *Keystone Manufacturing Co.* v. *Adams*, 151 U. S. 139, 144, 145; *McClain* v. *Ortmayer*, 141 U. S. 419, 425."

It is apparent that the same thing occurs in the B tubes of Dubbs and furnace No. 2 of the defendant's process. But plaintiff calls it generation of vapor and defendant says it is vaporization. When defendant says substantial vaporization occurs to the extent of 50% to 58% in furnace No. 2 he means by "vaporization" what plaintiff means by "generation" for both agree that the vapor does not separate from the liquid in the B tubes or furnace No. 2. "Generation" seems to be the more accurate term to describe what both say takes place, for admittedly vapor is produced, comes into existence, in the B tubes and furnace No. 2. Both parties state this to be the fact. It is also admitted that this generated vapor is not there separated from the liquid, and does not go off as vapor but continues as a mixture until it reaches the C tubes in the Dubbs process and the vapor separator, an equivalent, in the defendant's process.

In the Egloff patent, neither the phrase, "without substantial vaporization" nor its equivalent as respects the cracking tubes or coils, occurs. Even if the appellant has not infringed the Dubbs patent, it has infringed the Egloff patent whose process the appellant has substantially followed.

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2416 The disclosures in both the Dubbs and Egloff patents are novel and useful. They are accordingly valid and have been infringed by appellant. It follows that the decree must be affirmed.

Teste:

A true Copy:

Clerk of the United States Circuit Court of Appeals for the Third Circuit.

All underscoring is ours.

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2417-2418—United States Patent No. 1,537,593 (see index)

2419 34A

CIRCUIT COURT OF APPEALS OF THE UNITED STATES

For the Third Circuit.

(Stamp) Mail Division Jun 28 35 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 12th day of July, 1934, in this court an action, suit, or proceeding No. 5546, entitled:

Name Root Refining Co., Defendant-Appellant,
Address Delaware

versus

Name Universal Oil Products Co., Plaintiff-Appellee,
Address Chicago, Ill.

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,537,593	May 12, 1925	Gustav Egloff
2			
3			
4			
5			

In the above-entitled case, on the 16th day of May, 1930, the following patents have been included by Answer (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	954,575	Apr. 12, 1910	Lang
2	1,288,711	Dec. 24, 1918	Sherman
3	1,324,983	Dec. 16, 1919	Rosenbaum
4	1,619,921	Mar. 8, 1927	Egloff
5	1,740,691	Dec. 24, 1929	Greenstreet

In the above-entitled case the following decision has been rendered or decree issued:

6/26/1935 Opinion and decree of this Court affirms lower Court

In Witness Whereof I have affixed my hand this 27th day of June, 1935, at Phila

John P. Kelly,
Deputy Clerk of said Court.

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2420 DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 24th day of July, 1935, in this court an action, suit, or proceeding No. 1121 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,

Address Chicago, Illinois,

versus

Name Tyler-Texas Oil and Refining Company, a corporation of Delaware, Defendant,

Address .....

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this thirty-first day of July, 1935, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

77

2421 DISTRICT COURT OF THE UNITED STATES,

District of Delaware.

(Stamp) Mail Room Jan 27 1936 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 24th day of July, 1935, in this court an action, suit, or proceeding No. 1121 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Tyler-Texas Oil and Refining Company, a corporation of Delaware, Defendant,
Address .....
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Gustav Egloff
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 193....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

Jan. 18, 1936. Final consent decree adjudging U. S. Letters Patent Nos. 1,392,629 and 1,537,593 valid and infringed.

In Witness Whereof I have affixed my hand this twenty-fifth day of January, 1936, at Wilmington, Delaware.

H. C. Mahaffy, Jr.,
Clerk of said Court.

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2422 UNITED STATES DISTRICT COURT,

Eastern District of Louisiana.

(Stamp) Mail Division Jun 25 1936 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (41 Stat. L. .....), you are advised that there was filed on the 23rd day of June, 1936, in this court an action, suit, or proceeding No. 419 (Equity), entitled:
Name Universal Oil Products Company, Plaintiff,
Address Chicago, Illinois

versus

Name Chalmette Petroleum Corporation, Defendant,
Address New Orleans, La. & St. Bernard Parish, La.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	October 4, 1921	Carbon P. Dubbs
2	1,537,593	May 12, 1925	Universal Oil Products Company, as assignee of Gustav Egloff,
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1	.....	.....	.....
2	.....	.....	.....
3	.....	.....	.....
4	.....	.....	.....
5	.....	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....

.....

In Witness Whereof I have affixed my hand this 23rd day of June, 1936, at New Orleans, Louisiana.

H. J. Carter,
Clerk of said Court.

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2423 DISTRICT COURT OF THE UNITED STATES,

District of Kansas, 2nd Division.

(Stamp) Mail Division Sep 11 1936 U. S. Patent Office
Honorable Commissioner of Patents,
Washington, D. C.
Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the 9th day of September, 1936, in this court an action, suit, or proceeding No. 960-N, entitled:
Name Universal Oil Products Co., Plaintiff,
Address Chicago, Ill.

versus

Name National Refining Co., Defendant,
Address Coffeyville, Kans.
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1	1,392,629	10/ 4/21	Carbon P. Dubbs
2	1,537,593	5/12/25	Gustav Egloff
3	1,890,974	12/13/32	Carbon P. Dubbs
4			
5			

In the above-entitled case, on the ..... day of ....., 192....., the following patents have been included by ..... (insert amendment, answer, cross bill, or other pleading):

	Patent No.	Date of Patent	Patentee
1			
2			
3			
4			
5			

In the above-entitled case the following decision has been rendered or decree issued:

This case was originally filed at Fort Scott in the 3rd division and has been transferred to this division.

In Witness Whereof I have affixed my hand this Wichita 9th day of September, 1936, at Wichita

Howard F. McCue,
Clerk of said Court.
Fred J. Santerlee,
Deputy Clerk.

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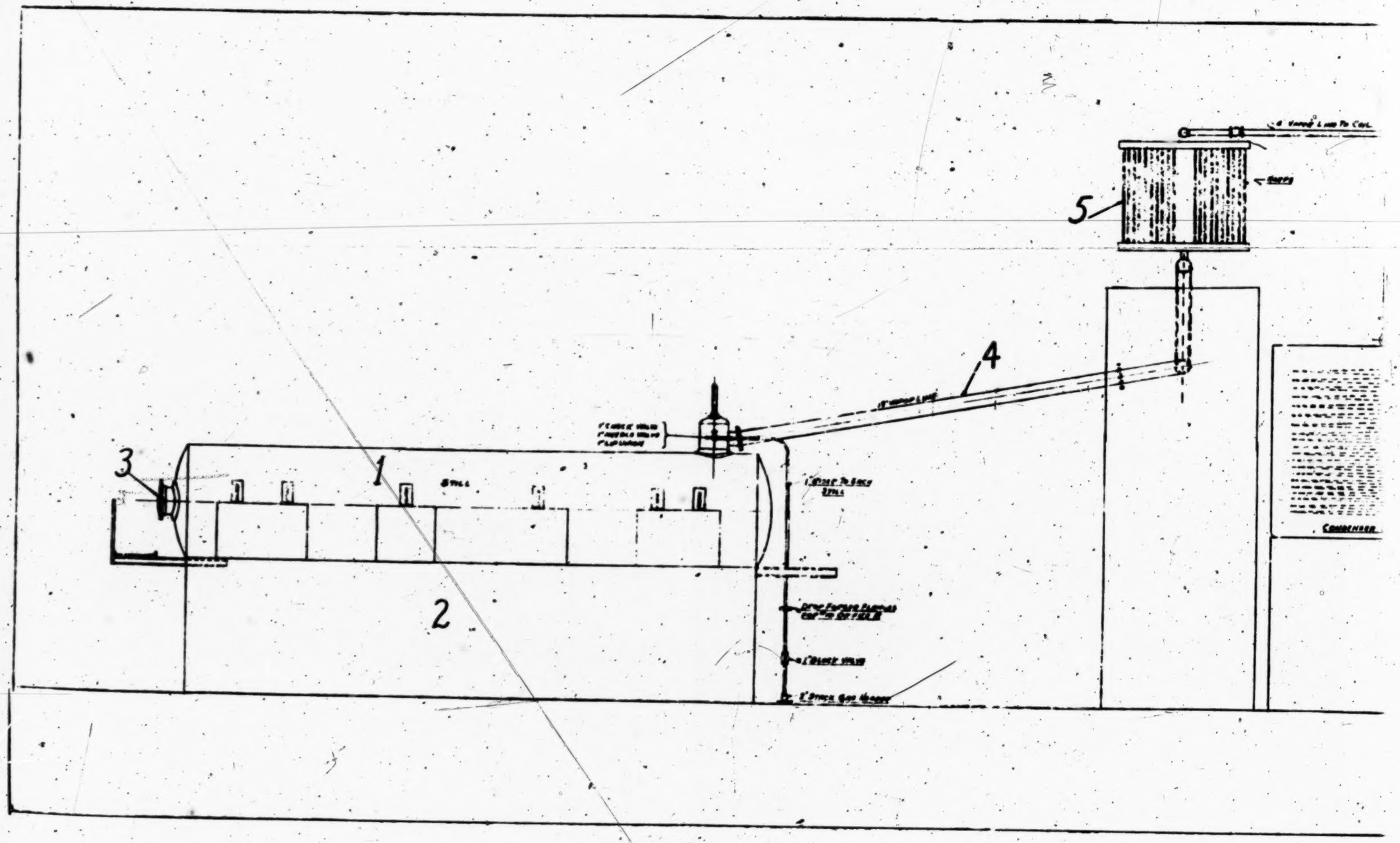
(Stamp) Special

CONTENTS.

1. Application ..... papers. OK
2. Rejection Dec 8 1921
3. Amendt A Dec. 8-1922
4. Rejection Oct 17 1923
5. Amdt B Aug 20 1924
6. Rejection Dec 18 1924
7. Asso. Power of Att'y. Mar 16, 1925
8. Amdt C Mar 16, 1925
9. Amdt D Mar 17, 1925
10. Examiner's Amend't Apr 10 1925
11. Notice of Suit Jan. 30-1926
12. Notice of Suit April 3-1929
13. Notice of Suit April 3-1929
14. Notice of Suit April 3-1929
15. Notice of Suit April 21-1930
16. Notice of Suit April 21-1930
17. Notice of Suit Jan. 23-1931
18. Notice of Suit Feb. 19-1931
19. Notice of Suit Oct. 2-1931
20. Notice of Suit Nov. 17-1931
21. Notice of Suit Feb. 13-1933
22. Notice of Suit Mar. 20, 1933
23. Notice of Suit May 25-1934
24. Notice of Suit July 28-1934
25. Notice of Suit July 28-1934
26. Notice of Suit July 28-1934
27. Notice of Suit July 28-1934
28. Notice of Suit Aug. 27-1934
29. Notice of Appeals Oct. 29-1934
30. Notice of Suit Nov. 8-1934
31. Notice of Suit Mar. 8-1935
32. Notice of Suit Mar. 18-1935
33. Notice of Suit April 10-1935
34. Notice of Appeals June 28-1935
35. Notice of Suit Aug. 2-1935
36. Notice of Suit Jan. 27-1936
37. Notice of Suit June 25-1936
38. Notice of Suit Sept. 11-1936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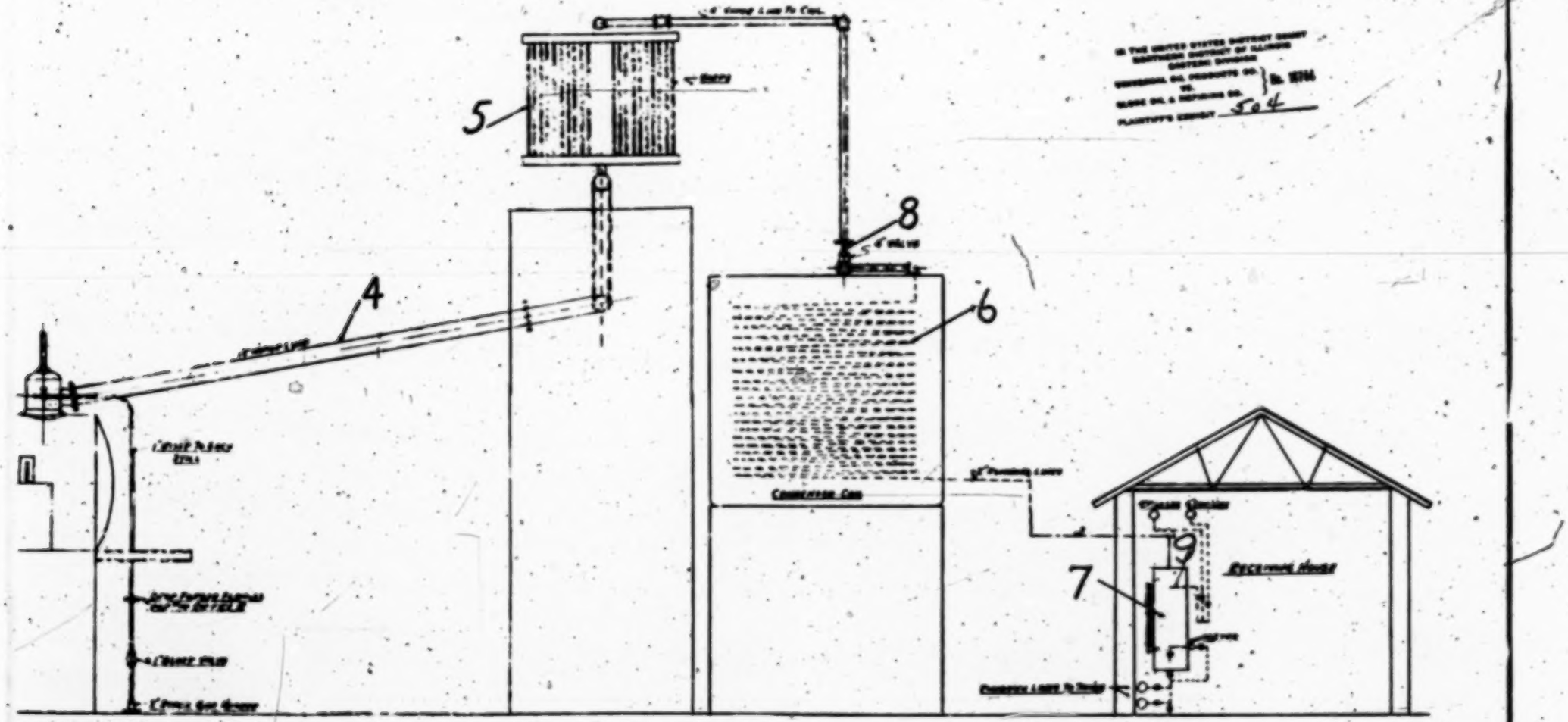
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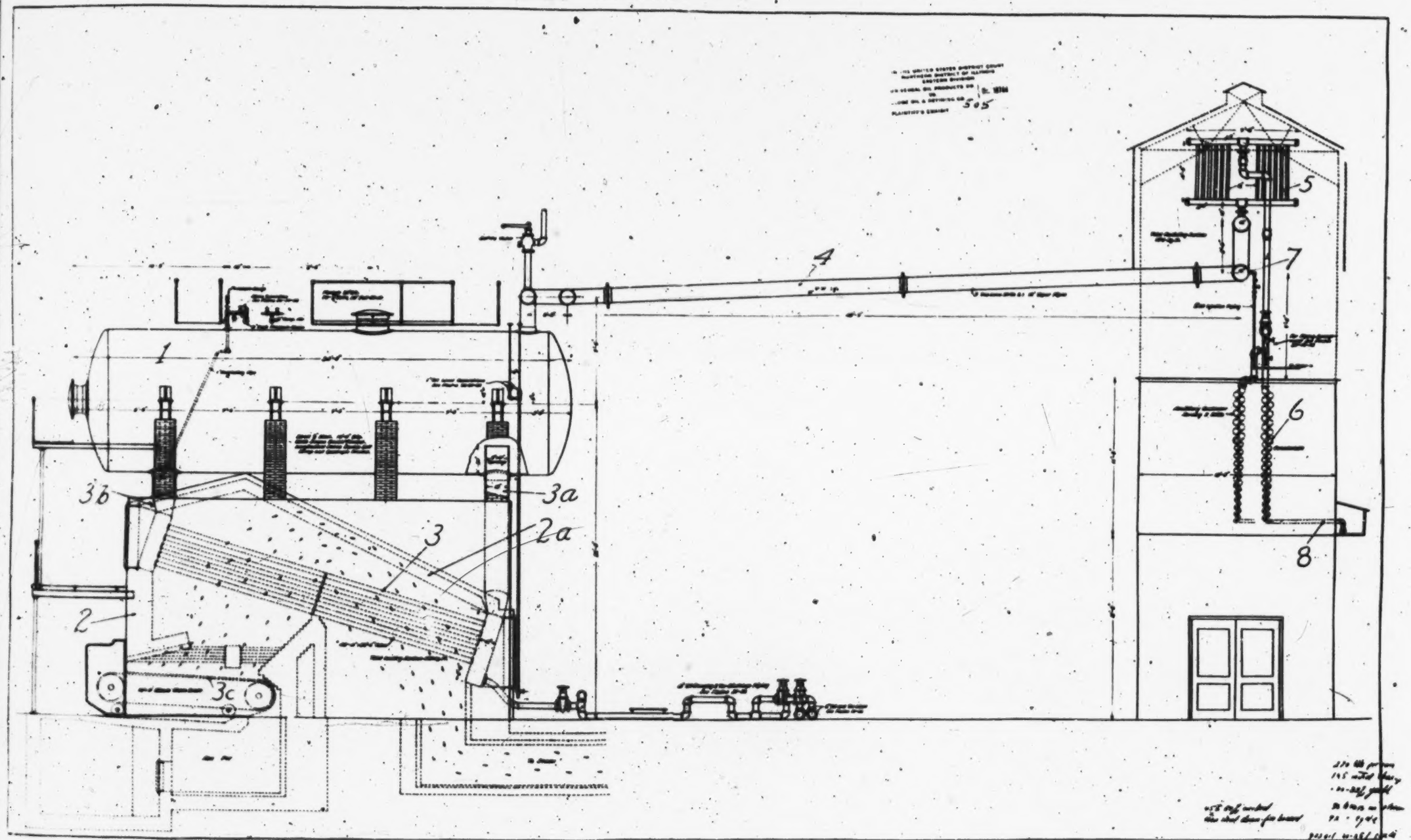
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1701

M. J. TRUMBLE.

PROCESS AND APPARATUS FOR CONVERTING PETROLEUM OILS.

APPLICATION FILED JULY 19, 1915.

1,281,884.

Patented Oct. 15, 1918.

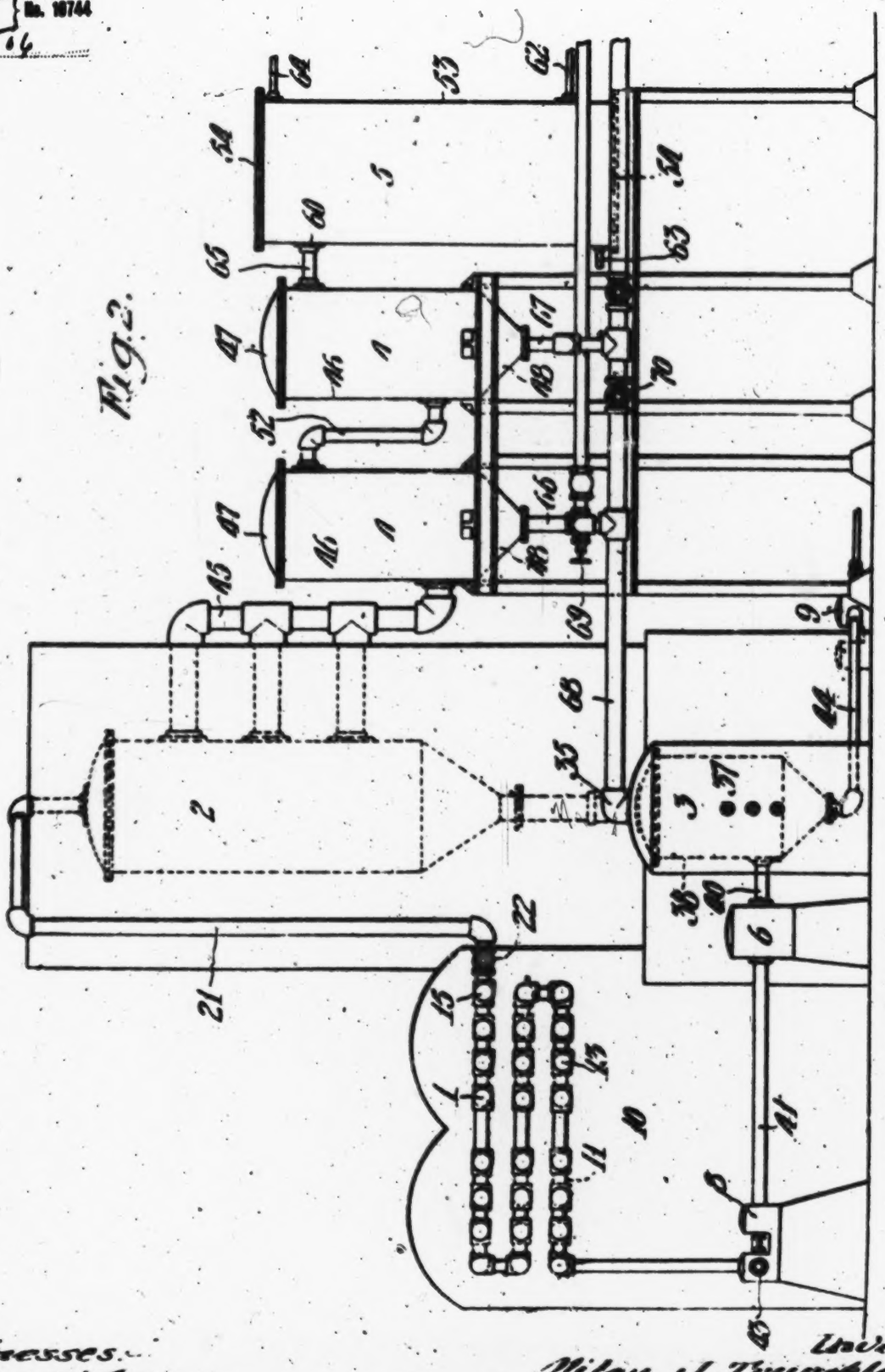
5 SHEETS—SHEET 2.

IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

UNIVERSAL OIL PRODUCTS CO.
vs.
GLOBE OIL & REFINING CO. } No. 18744

PLAINTIFF'S EXHIBIT 16

Fig. 2.



Witnesses.

Inventor
Milan J. Trumble

1703

June 24, 1930. R. A. HALLORAN ET AL 1,765,976

PROCESS OF CRACKING PETROLEUM OILS

Original Filed Sept. 4, 1923

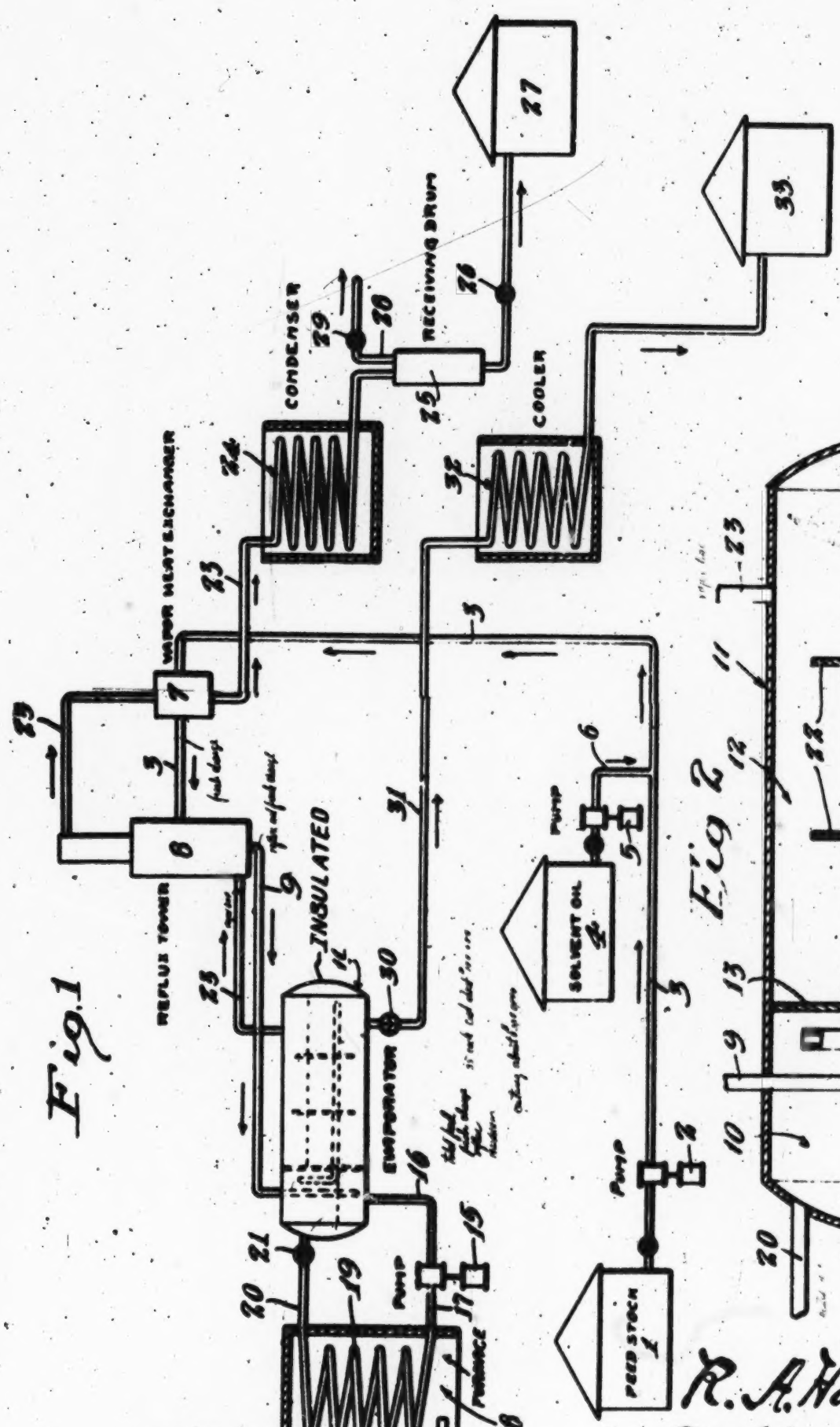


Fig. 1

Fig 2

R. A. Halloran, Inventors
Archie L. Strout
Lyon & Lyon

1703

FLAP UP - EGLOFF
FLAP DOWN - DUBBS

HIGH PRESSURE FURNACE

910°F
ABOUT 90% BY WEIGHT LIQUID

THIRD BANK
62 TUBES 3" I.D. x 4" O.D. x 27'-0"

SECOND BANK
48 TUBES 3" I.D. x 4" O.D. x 27'-0"

FOURTH BANK
48 TUBES 3" I.D. x 4" O.D. x 27'-0"

FIFTH BANK
32 TUBES 3" I.D. x 4" O.D. x 27'-0"

FIRST BANK
48 TUBES 3" I.D. x 4" O.D. x 27'-0"

LINEAR VELOCITY IN BANKS 4 & 5
20-25 FT. I SEC.
LENGTH OF BANKS 4 & 5
1100 FT.
TIME IN BANKS 4 & 5 ABOUT 1 MINUTE

SEPARATOR
8'-6" x 41'-3"

ABOUT { 16 BARRELS LIQUID IN FOAM
1 BARREL VAPOR IN FOAM
3 BARRELS VAPOR ABOVE FOAM

ABOUT { 6000 LBS. I.D. GAS
105 B/D GASOLINE
20 B/D P.D. BOTTOMS
120 B/D GAS OIL
PRODUCED IN VAPOR SEPARATOR BY CRACKING

ABOUT { 1755 B/D GASOLINE
PRODUCED IN HIGH PRESSURE FURNACE BY CRACKING AND REFORMING

725°F

665°F

660# PRESSURE

PRESSURE RELEASE VALVE

SEPT. 1927 ABOUT 95% BY WEIGHT LIQUID ABOUT 5% OF STEAM VOLUME OCCUPIED BY LIQUID

800°F
26# PRESS

NO. 6 TRYCOCK	EL. 30'-0"
NO. 5 TRYCOCK	NOT USED
NO. 4 TRYCOCK	EL. 22'-0" 28° GRAVITY
NO. 3 TRYCOCK	EL. 18'-0" 22.5 GRAVITY
NO. 2 TRYCOCK	EL. 14'-0" 12.2 GRAVITY
NO. 1 TRYCOCK	EL. 9'-0"

805°F

EL. LEVEL

HEAT EXCHANGERS

BUBBLE TOWER
8'-6" x 59'-7"

375°F

405°F

475°F

360°F

24# PRESSURE

595°F

GAS 5'-0"

GAS OIL

COOLER

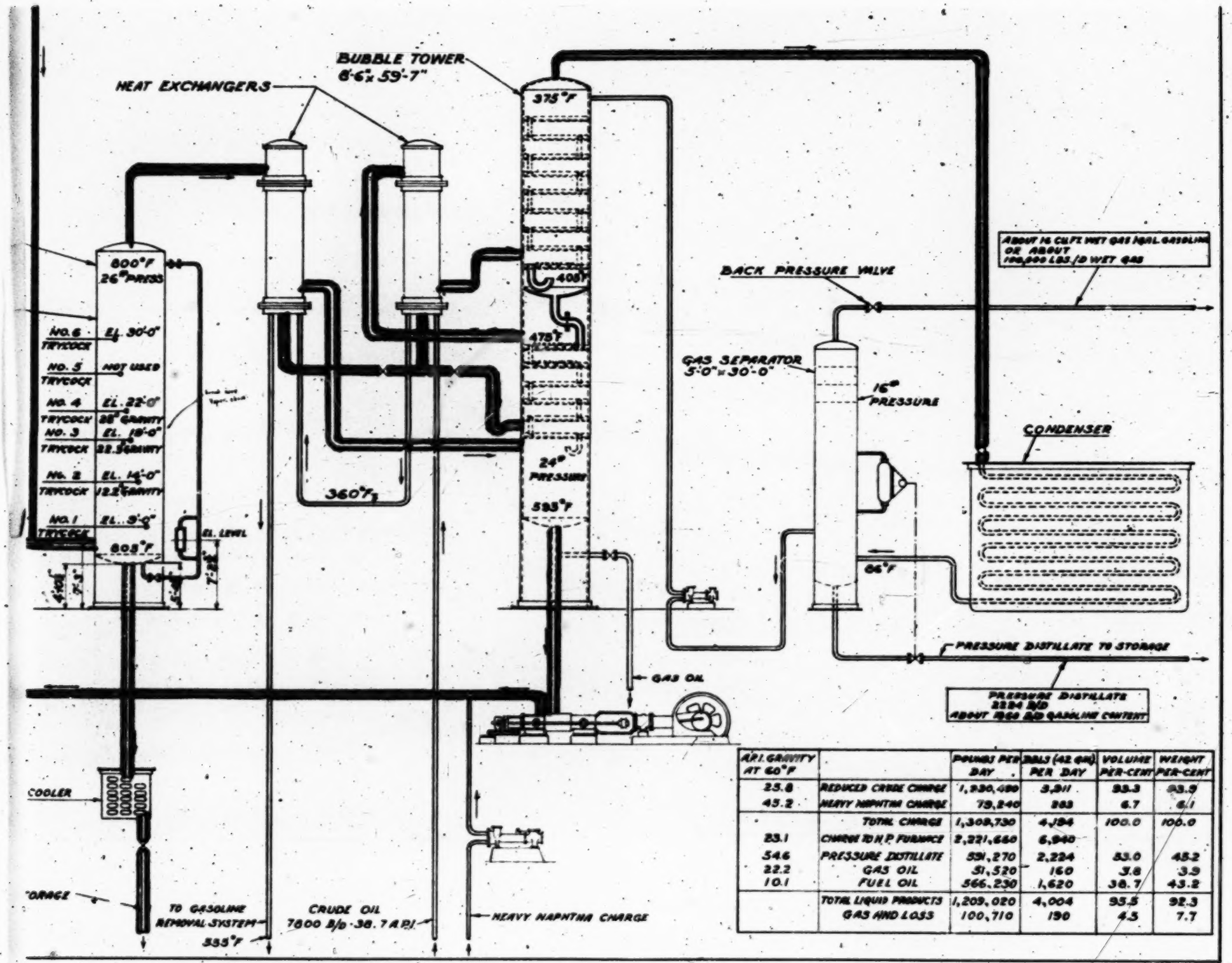
FUEL OIL TO STORAGE

TO GASOLINE REMOVAL SYSTEM
535°F

CRUDE OIL
7800 B/D - 38.7 A.P.I.

HEAVY NAPHTHA CHARGE

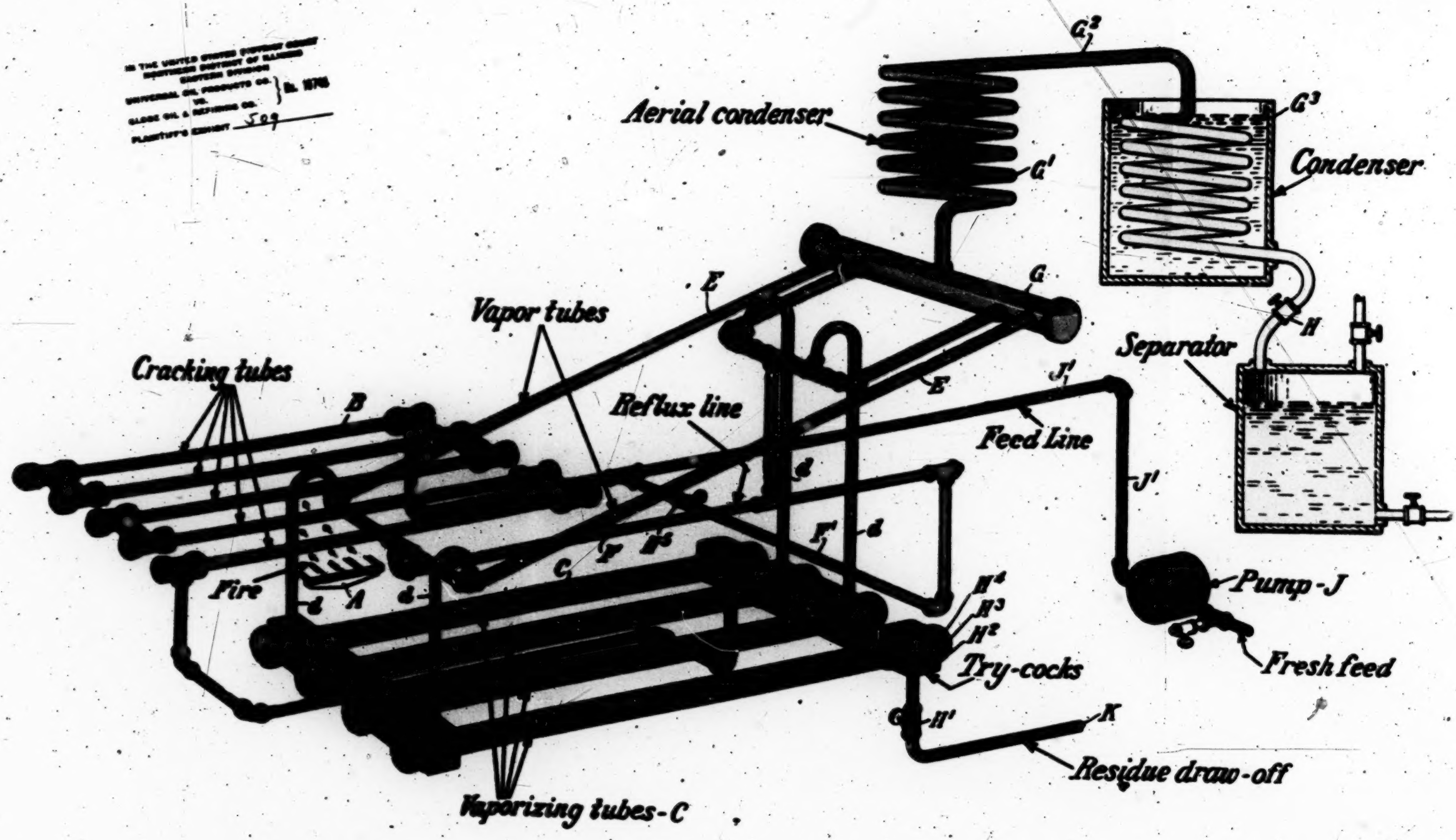
IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION
UNIVERSAL OIL PRODUCTS CO.
vs.
KARG OIL & REFINING CO.
PLAINTIFF'S EXHIBIT 508



A.P.I. GRAVITY AT 60°F		POUNDS PER DAY	BBLS (42 GAL) PER DAY	VOLUME PER-CENT	WEIGHT PER-CENT
25.8	REDUCED CRUDE CHARGE	1,230,480	3,811	93.3	93.9
45.2	HEAVY NAPHTHA CHARGE	78,240	283	6.7	6.1
	TOTAL CHARGE	1,308,730	4,194	100.0	100.0
23.1	CHARGE TO H.P. FURNACE	2,221,660	6,940		
54.6	PRESSURE DISTILLATE	551,270	2,224	53.0	45.2
22.2	GAS OIL	51,520	160	3.8	3.9
10.1	FUEL OIL	566,230	1,620	38.7	43.2
	TOTAL LIQUID PRODUCTS	1,209,020	4,004	95.5	92.3
	GAS AND LOSS	100,710	190	4.5	7.7

Dubbs - Patent No. 1,392,629.

IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION
UNIVERSAL OIL PRODUCTS CO.
vs. } In. 1776
GLOBE OIL & REFINING CO.
PLAINTIFF'S EXHIBIT 509



1709

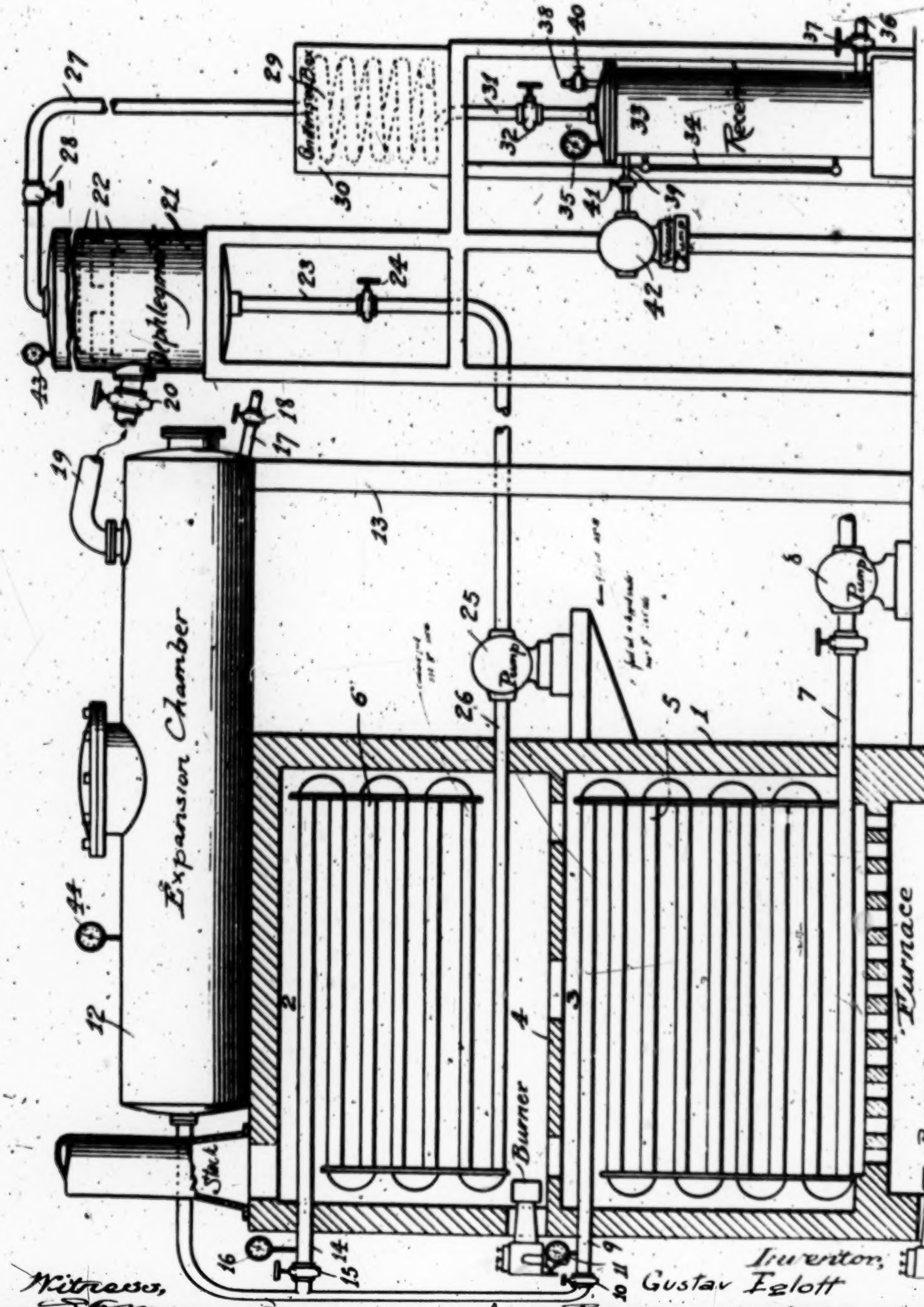
May 12, 1925.

1,537,593

G. EGLOFF

PROCESS FOR CRACKING OIL

Filed Dec. 9, 1920



1709

Fig. 82- Holmes-Manley Process as used by the Texas Co. and Standard Oil Co. (Indiana)

Form No. L-3
1713

No 6200 Engineering Societies Library
29 West 39th Street

PX 515

Trade Standards

in the

Pump Industry

Recommended by
The Hydraulic Society
1921

TYPICAL SIZES OF TRADE PUMPS

The following are recommended as being typical sizes of Trade Pumps for 150 lb. working pressure:

For boiler feed and general service pumps:

3 x 2 x 3	7½ x 4½ x 10
4½ x 2¾ x 4	7½ x 5 x 10
5¼ x 3½ x 5	9 x 5¼ x 10
6 x 4 x 6	10 x 6 x 10
7½ x 5 x 6	10 x 6 x 12
7 x 4½ x 8	12 x 7 x 12
14 x 8½ x 12	

In specifying the boiler horse-power for Feed Pumps, it is recommended that 34.5 pounds evaporation be used as the basis for calculation.

For low service pumps:

4½ x 4 x 4	7½ x 7 x 10
5¼ x 5 x 5	7½ x 8 x 10
6 x 6 x 6	10 x 7 x 10
7½ x 7 x 6	10 x 8 x 10
7½ x 6 x 10	10 x 8½ x 12

Low service pumps to be good for 75 pounds working pressure.

BOILER FEED RATINGS

The following ratings are considered conservative for the sizes of Duplex Pumps enumerated. They are based on 34.5 pounds of water per boiler H.P. hour and are considered good practice, worthy of adoption:

3 x 2 x 3	.....	80 Boiler H.P.
4½ x 2¾ x 4	.....	180 "
5¼ x 3½ x 5	.....	325 "
6 x 4 x 6	.....	460 "
7 x 4½ x 8	.....	680 "
7½ x 5 x 6	.....	725 "
7½ x 4½ x 10	.....	845 "
7½ x 5 x 10	.....	1060 "
9 x 5¼ x 10	.....	1170 "
10 x 6 x 10	.....	1515 "
10 x 6 x 12	.....	1560 "
12 x 7 x 12	.....	2125 "
14 x 8½ x 12	.....	3140 "

PX 516

Wm E Reid

WORTHINGTON

WORTHINGTON PUMP AND MACHINERY CORPORATION

115 BROADWAY, NEW YORK

Bulletin W-308-B U. S. A. June, 1920

WORTHINGTON

Duplex Piston Pattern Pumps

FOR

General Service

BRANCH HOUSES

ATLANTA	435 Trust Co. of Georgia Bldg.	LOS ANGELES	209-210 Higgins Bldg.
BIRMINGHAM	Am. Trust & Sav. Bk. Bldg.	NEW ORLEANS	833 Baronne Street.
BOSTON	465 Massachusetts Trust Bldg.	PHILADELPHIA	1516 No. American Bldg.
BUFFALO	707 Iroquois Bldg.	PITTSBURGH	407 Oliver Bldg.
CHICAGO	939 Old Colony Bldg.	ST. LOUIS	701 Laclede Gas Bldg.
CINCINNATI	1503 First Nat'l Bank Bldg.	ST. PAUL	1017 Commerce Bldg.
CLEVELAND	304 Rockefeller Bldg.	SALT LAKE CITY	318 Felt Bldg.
DENVER	435 Seventeenth Street.	SAN FRANCISCO	306 Sharon Bldg.
DETROIT	839 Majestic Bldg.	SEATTLE	305 Maynard Bldg.
EL PASO	510 Mills Bldg.	TULSA	123 West First Street.
HOUSTON	425 Southern Pacific Bldg.	WASHINGTON, D. C.	426 Homer Bldg.
KANSAS CITY	824 Scarritt Bldg.	LONDON	Queen's House, Kingsway.

WORTHINGTON WORKS, HARRISON, N. J.

Established 1840

Copyright, 1920

Fig. 9 Size, 3 x 2½ x 3

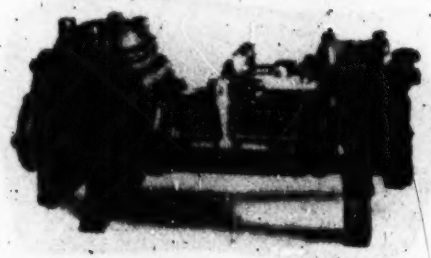


Fig. 10 Size, 6½ x 4½ x 6

Fig. 11 Size, 6 x 6½ x 6

WORTHINGTON DUPLEX PACKED PISTON PUMP

Tank Pattern—For Light Service

The Worthington Duplex Packed Piston Pump

Tank Pattern—For Light Service

This line parallels that listed on page 7 as to type, but the water ends are designed for lighter working pressures, all of the sizes being good for a maximum of 75 pounds per square inch. The pumps are intended for tank supply and other similar uses where the head or pressure to be pumped against does not exceed the figures mentioned. The ratio of the steam to the water pistons is such that liquids may be raised to moderate heights with the low steam pressures which are frequently encountered in small isolated pumping plants. The water ends are of the submerged type, see Fig. 43, page 4. The valves in the pump end would be furnished of any material suitable to the liquid to be pumped. These pumps will be found especially suitable for use at railway water stations, and in breweries, gas and oil works, tanneries, bleacheries, refineries, etc.

Bronze rods and brass water pistons are included in the regular construction of the first two sizes. On all other sizes these brass parts are extras and only furnished when especially ordered.

TABLE OF SIZES AND CAPACITIES

Code Word	Pages No.	Diameter of Steam Cylinders	Diameter of Water Pistons	Stroke	Gallons per Revolution	Normal Rating		Pipes				Length	Width
						H. P.	G. P. M.	Steam	Exhaust	Suction	Delivery	Ft. and Ins.	
Oaiyq	9	3	2¾	3	.3	55	16.5	¾	1¼	1½	1	2- 0	0- 9
Oacse	10	4½	3¾	4	.75	30	37.5	1	1½	2½	1½	3- 0	1- 1
Oacbo	10	5½	4¾	5	1.51	45	67.95	1¼	1½	3	2	3- 3	1- 4
Oacep	11	6	5¼	6	2.05	60	106.00	1	1½	4	3	3-11	1- 5
Oacin	11	7½	7½	6	4.54	60	181.60	1½	2	6	5	4- 1	1-10
Oacoa	11	7½	8½	6	5.84	60	233.60	1½	2	6	5	4- 1	1-10
Oacqe	10	7½	6	10	4.76	35	166.60	1½	2	5	4	4- 9	2- 6

One revolution means four single strokes, counting both sides.
For emergency speed and capacity add 30 per cent.

Fig. 12, Size, 9 x 8½ x 10

Fig. 13 Size, 12 x 12 x 12

Fig. 14 Size, 12 x 14 x 12
WORTHINGTON DUPLEX PACKED PISTON PUMP
Tank Supply Turret Pattern

The Worthington Duplex Packed Piston Pump

Tank Supply Turret Pattern
For Light Service

This list is practically a continuation in the larger sizes of the Low Service Tank Pumps as shown on pages 14 and 15. All of the water ends in the table below are designed for a working pressure of 75 pounds per square inch.

Bronze rods or brass water pistons are furnished when specially ordered.

TABLE OF SIZES AND CAPACITIES

Code Word	Steam Cylinder Diameter	Steam Cylinder Stroke	Water Cylinder Diameter	Water Cylinder Stroke	Normal Rating R. P. M.	Normal Rating Gallons per Minute	Pipes Steam	Pipes Exhaust	Pipes Suction	Pipes Discharge	Floor Space Ft. and Ins.	Floor Space Ins.
Oarum	10	7½	7	10	6.52	35	228.20	1½	2	6	5 4-16	2- 0
Oarwy	10	7½	8½	10	9.04	35	328.80	1½	2	6	5 4-11	2- 0
Oaryr	10	9	8½	10	9.04	35	328.80	2	2½	6	5- 1	2- 0
Oadbu	12	9	12	10	19.45	35	680.75	2	2½	10	8 6- 3	3- 0
Oadcy	12	10	12	10	19.45	35	680.75	2	2½	10	8 6- 3	3- 0
Oadke	12	12	12	10	19.45	35	680.75	2½	3	10	8 6- 3	3- 0
Oadip	14	12	14	10	26.47	35	926.45	2½	3	12	10 7- 0	3- 6
Oadny	14	14	14	10	26.47	35	926.45	2½	3	12	10 6-11	3- 6
Oadxl	12	8	8½	12	11.30	30	345.00	1½	2	6	5- 5	2- 0
Oadob	12	10	10¼	12	16.94	30	500.40	2	2½	8	7- 6	3- 0
Oadra	12	10	12	12	23.34	30	700.20	2	2½	10	8 6- 6	3- 0
Oadte	12	12	12	12	23.34	30	700.20	2½	3	10	8 7- 0	3- 0
Oadun	14	12	14	12	31.76	30	932.80	2½	3	12	10 7- 4	3- 6
Oadyr	14	14	14	12	31.76	30	932.80	2½	3	12	10 7- 2	3- 6

One revolution means four single strokes, counting both sides.
For emergency speed and capacity add 50 per cent.

Fig. 22 Size, 14 x 14 x 12

WORTHINGTON DUPLEX PACKED PISTON PUMP

Straight-Way Low Service Pattern

WORTHINGTON PUMP AND MACHINERY CORPORATION

The Worthington Duplex Packed Piston Pump

Straight-way Low Service Pattern—75 Pounds Water Pressure

This is the same design of pump shown on pages 26 and 27, except that the water end is of lighter construction, being designed for a maximum working pressure of 75 pounds per square inch. It is intended for tank supply and other similar purposes where the total water pressure to be pumped against does not exceed the maximum mentioned. Sectional cut of the Straight-way Pump is shown by Fig. 44, page 4.

Bronze rods or brass water pistons are furnished when specially ordered.

TABLE OF SIZES AND CAPACITIES

Code Word	Figure No.	Diameter of Steam Cylinder	Diameter of Water Plungers	Normal Rating: Strokes	Normal Rating: Gallons per Revolution	Normal Rating: H. P. M.	Normal Rating: G. P. M.	Pipes: Steam	Pipes: Exhaust	Pipes: Suction	Pipes: Delivery	Length (Ft. and Ins.)	Width (Ft. and Ins.)
Obauk	##	8	8½	12	11.50	30	348 00	1½	2	6	5	6- 5	3- 7
Obayu	##	8	10	12	16.00	30	480 00	1½	2	8	7	6-10	3-10
Ocass	##	10	12	12	23.34	30	700 30	2	2½	10	8	6-11	4- 1
Ocsbo	##	12	12	12	23.35	30	700 30	2½	3	10	8	7- 5	4- 1
Ocsep	##	10	14	12	31.76	30	952 80	2	2½	12	10	7- 2	4- 5
Ocshi	##	12	14	12	31.76	30	952 80	2½	3	12	10	7- 8	4- 5
Ocsin	##	14	14	12	31.76	30	952 80	2½	3	12	10	7- 8	4- 5
Ocsmu	##	12	16	12	41.30	30	1241 70	2½	3	14	12	8- 6	4- 7
Ocsos	##	14	16	12	41.30	30	1241 70	2½	3	14	12	8- 6	4- 7
Ocsqe	##	16	16	12	41.30	30	1241 70	2½	3	14	12	8- 8	4- 7

One revolution means four single strokes, counting both sides.
For [illegible] speed and capacity add 30 per cent.

Fig. 33 Size, 14 and 20 x 14 x 12

WORTHINGTON COMPOUND DUPLEX PACKED PISTON PUMP
Straight-Way Pattern—For Light Service

WORTHINGTON PUMP AND MACHINERY CORPORATION

The Worthington Compound Duplex Packed Piston Pump

Straight-way Pattern—Light Service

This is the same pattern as illustrated and described on the preceding pages, the only difference being that the water end is of lighter construction, being designed for a maximum working pressure of 75 pounds per square inch. The ratios between the steam and water ends are therefore closer than those of the General Service Pumps, as the maximum water pressure may be secured with ordinary steam pressure when smaller steam cylinders are employed.

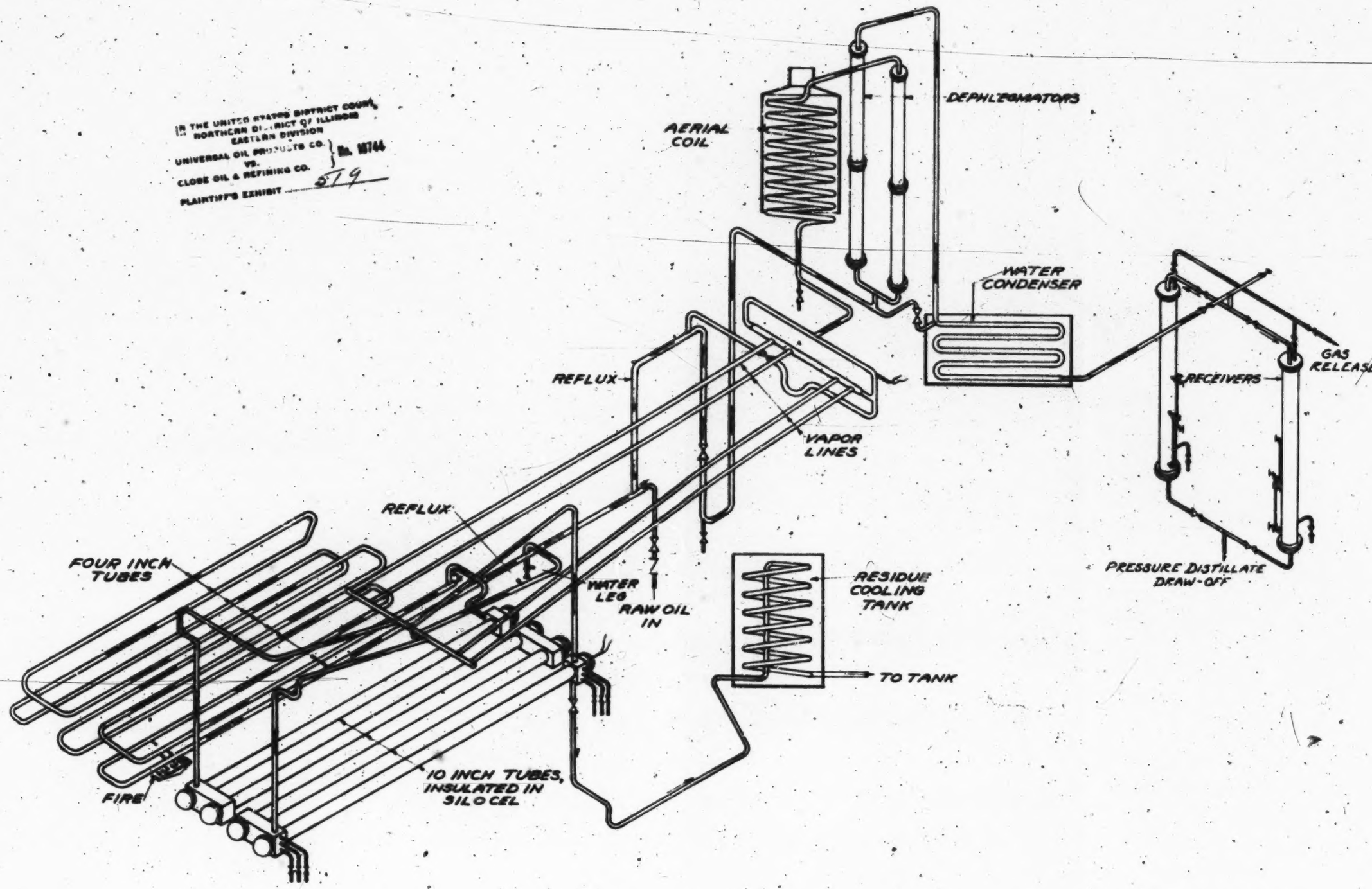
Bronze rods or brass water pistons are furnished when specially ordered.

TABLE OF SIZES AND CAPACITIES

Code Word	Figure No.	Diameter of Steam Cylinders	Diameter of Water Pistons	Stroke	Gallons per Revolution	Normal Rating R. P. M.	Normal Rating G. P. M.	Pipes Steam	Pipes Exhaust	Pipes Suction	Pipes Delivery	Floor Space Length Ft. and Ins.	Floor Space Width Ft. and Ins.
Orosh	33	8 & 12	8½	12	11.50	30	345	60	2	3	6	5	9-0 4-8
Oroto	33	9 & 14	8½	12	11.50	30	345	60	2	3	6	5	9-1 3-8
Oroua	33	8 & 12	10	12	16.00	30	480	60	2	3	8	7	9-1 3-10
Orovy	33	9 & 14	10	12	16.00	30	480	60	2	3	8	7	9-2 3-10
Orowf	33	10 & 16	10	12	16.00	30	480	60	2	3	8	7	9-2 3-10
Orpah	33	9 & 14	12	12	23.34	30	700	30	2	3	10	8	9-0 4-1
Orpec	33	10 & 16	12	12	23.34	30	700	30	2	3	10	8	9-2 4-1
Orpia	33	12 & 18	12	12	23.34	30	700	30	2½	3½	10	8	9-3 4-1
Orpoq	33	10 & 16	14	12	31.76	30	952	80	2	3	12	10	9-10 4-5
Orpuh	33	12 & 18	14	12	31.76	30	952	80	2½	3½	12	10	10-0 4-5
Orpyg	33	14 & 20	14	12	31.76	30	952	80	2½	5	12	10	10-0 4-5
Orqal	33	10 & 16	16	12	41.39	30	1241	70	2	3	14	12	10-8 4-7
Orqed	33	12 & 18	16	12	41.39	30	1241	70	2½	3½	14	12	10-10 4-7
Orqib	33	14 & 20	16	12	41.39	30	1241	70	2½	5	14	12	10-10 4-7

One revolution means four single strokes, counting both sides.
For emergency speed and capacity add 30 per cent.

IN THE UNITED STATES DISTRICT COURT,
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION
UNIVERSAL OIL PRODUCTS CO.
vs. No. 18744
CLOSE OIL & REFINING CO.
PLAINTIFF'S EXHIBIT 519



2441 PX 520.

(Letterhead of Richard Airey, New York.)

New York, October 6, 1919.
Please Quote References.

Dear Mr. Van der Gracht:—

After our last meeting with Mr. H. J. Halle we both had the impresssion that the matter had been finally dropped and that it would be impossible to come to an understanding with him.

However, Wednesday Mr. Halle called me on the 'phone and wanted to reopen the discussions. This of course gave me the impression that he would be willing to meet us in our objections to his proposal of August 5th, and I therefore arranged another conference with him, after talking the matter over with General Andrews. I had more or less lengthy discussions with him on Wednesday, Thursday and Friday, and the result of our talks was boiled down to the short memorandum dictated in my presence by Mr. Halle, which I enclose herewith.

I must honestly say, that I was glad to find Mr. Halle more inclined to modify his terms in such a way that they would be less objectionable to us, because I really consider their process to be a very valuable one. You know that on account of the peculiar conditions under which a gasoline producing cracking plant has to work, viz., very high temperatures and high pressures, I have always con-
2442 sidered an apparatus consisting of pipes of small diameter and small contents preferable by far over pressure stills with their large dimensions and large contents of overheated oil. For this reason I put my faith in our converter.

It is of course more or less disagreeable for me to say so, but I am convinced that, even if we should finally develop our converter into a gasoline plant (which, by the way, we have not yet accomplished), the Dubbs process will always have the advantage of greater simplicity, as it does not use a circulating pump; and greater simplicity means, especially in apparatus of this character, diminished risk of breakdowns or failures, reduced cost of installation and of upkeep and repair. Therefore, I can only say that, as far as the cracking of gasoil into gasoline is concerned, we are already beaten in advance, and I think it is

better to acknowledge this, than to hang on to a lost cause for sake of personal or "company" pride.

This does not mean, that I propose to stop further experiments for the development of our converter process. On the contrary, we must continue work in that direction, with the object of cracking heavy residuums into gasoil, which then could be further cracked into gasoline in
2443 pressure stills or in Dubbs' plants, or, if possible, direct into gasoline. But I do not consider it possible to beat the Dubbs process by the converter for the purpose of cracking gas oil.

As regards the alterations now proposed by Mr. Halle, the reductions of the royalty from 25¢ to 15¢ is rather important. Mr. Halle stated that for other licensees he would not make that reduction, but in our case he could defend it on account of the similarity of their process with ours, and the advanced state of development of our process! Or in other words he gives us a reduction of 10¢ per barrel for not using the converter process. Anyhow, it does not matter how he explains the reduction, he is prepared to make it.

If run as at Independence, the gas oil is cracked into gasoline and kerosene as main final products. If we find the kerosene to be of inferior quality, which he maintains not to be the case, or if the price of kerosene is too low to make its production at the cracking plant profitable, we can always increase the cooling capacity of the dephlegmator arrangement and let the bulk of the kerosene flow back to the cracking tubes to convert it into gasoline. Running in the ordinary way, Halle guarantees 23% of gasoline, but the actual figures show a percentage of gasoline produced, varying between 28 and 30%, and by increasing the
2444 quantity of reflux from the dephlegmators, this can be easily brought up to over 35%. This means that a royalty of 15¢ per barrel will amount to about 1¢ per gallon.

This is still about double the royalty asked by the Fleming people, but, considering that the cost of installation per barrel average daily capacity will be about $90.—for the Dubbs plant and $230.—for the Fleming plant, this difference in royalty will be practically offset by the difference in cost of depreciation, interest, insurance and upkeep. In other words, if we consider a royalty of ½¢ per gallon gasoline fair in the case of the Fleming contract, we

can also agree to the royalty of 15¢ per barrel intake of the Dubbs plant.

The second point, concerning the possibility of difficulties arising from the similarity of our converter patent and the Dubbs patent, there is a distinct difference between the two patents and that is, that we use a circulating pump to circulate part of the residuum from the evaporator back through the heating tubes, in order to create a sufficient velocity to prevent undue settling of carbon in these tubes. I take it that our Company intends to act with complete fairness in this matter and would consider it unfair to follow the general method of working of the Dubbs process, circulating however a very small quantity of residuum in order to be able to call it a converter.

2445 It will perhaps be difficult, but it does not seem impossible to fix a distinct line of demarkation between the two processes. Mr. Halle's patent attorney, Mr. Bell, will be here for a few days and I shall discuss this matter with him.

If we come to an agreement with Mr. Halle, we will, in the royalty contract, of course have to acknowledge the validity of their patents. As far as the patents covering specifically their present system of working are concerned, we can not have any objection to do so, but it is a question to my mind whether we should acknowledge the validity of their U. S. Patent No. 1,123,502, which they pretend, covers the use of pressure stills, working with condensors in open connection, and which forms the basis of their infringement suit against the Standard Oil Company. As a matter of fact, although the possibility exists that they will win this suit, I would consider this unfair from a purely technical point of view, and I believe that we should be very careful before committing ourselves. For the present we do not intend to use any apparatus based on this principle (Fleming does not condense his product under pressure) but I think it would be safer to avoid the risk of difficulties. If they win their suit, we have to acknowledge the validity of this patent anyhow.

2446 The third point need not be discussed any further, but we still have to fight the fourth one, as we could certainly not accept any clause in the contract interfering with our business policies. I discussed this point with General Andrews, who stated that the policy of the Royal Dutch-Shell has always been to refrain from unreasonable

and destructive competition, and that therefore this clause was superfluous and unacceptable.

I will keep you informed of further developments. Both General Andrews and Mr. Airey are very much in favor of an understanding with the Dubbs interests. Not only does their process seem to be a very valuable one, but if we do not come to an agreement, they might cause us a lot of trouble, and as you know, they are financially very well backed by the Armour people. The fact that we closed already with Fleming does not form an objection. By erecting and operating both plants we would be enabled to make valuable comparisons between pressure stills and pipe systems, as regards cost of installation and running as well as cost and quality of products.

Yours very truly,

P/L

Endorsed: Filed Mar. 26, 1942. Hoyt King, Clerk.

2447 Memorandum.

New York, October 3, 1919.

This memorandum is intended to set out in reasonably definite form the results of the conferences recently held between Mr. H. J. Halle, Pres. of the Universal Oil Products Co., and Mr. D. Pyzel, on behalf of the Roxana Petroleum Company.

These conferences have resulted from a consideration of a written proposal under date of Aug. 5th, 1919, by the Universal Oil Products Co., addressed to W. A. J. M. van Weterschoot van der Gracht, Pres. of the Roxana Petroleum Co.

In view of the special conditions prevailing with your company through your interest and operation under the Trumble patents, and the scope and extent of the operation of your affiliated companies, and the desire on our part to have you the first licensee to start and operate on an extensive and commercial scale under the various Dubbs' patents and inventions, for which patent applications are pending, and further improvements and developments, for which applications for patents will be made by this company, we have concluded to favorably consider the following revisions and additions to the proposals of August 5th above referred to.

1—Instead of a royalty of 25¢ per barrel as referred to

in the proposal, the royalty to be 15¢ per barrel on each 42 gallon barrel of charging stock run, under the patented processes and the apparatus or methods or processes which are the subject of patent application filed and to be filed by us or which may be acquired by our company.

2—You and we are to reach an agreement on the respective scope of the Dubbs and other patents and inventions relating to the so-called Dubb's process referred to and the scope and limitations of the process operated by you under the so-called Trumble patents with a view to arriving at an amicable understanding of the extent to which the so-called Trumble process may be utilized or extended by you without claim by us of infringement on the so-called Dubb's process.

3—Relative to the condition imposed in the proposal of Aug. 5th covering obligation on the part of the Roxana Co. to promptly build and operate nine (9) additional stills after the proving-out period specified for the first still referred to in the proposal, we will favorably consider suitable limitations in this obligation imposed on you so that—(a) you will not be obliged to erect all or any of these additional stills if, or as long as a sufficient quantity of gas oil at a proper market price is not available for your needs for running through and cracking in these stills; (b) if or as long as the relation between the cost prices or market prices of the charging stock and the selling price of the gasoline and kerosene and other products of the process do not show a suitable profit to your company, substantially in line with the estimated profit showing of your present calculations.

4—It is intended, for the present and until and unless otherwise agreed to, that the license shall be limited to the total to ten stills referred to in the proposal of Aug. 5th, 1919.

Limitations as to the number of stills to be built under a license except by special agreement, is considered by us to be a protection of the licensees against unreasonable and destructive competition by any one of them.

Please be assured that it is the intention of the company, that in the operation of this license you shall at all times be on the most favorable basis.

Endorsed: Filed Mar. 26, 1942. Hoyt King, Clerk.

2448 **PX 521-A.**

(Filed Mar. 26, 1942. Hoyt King, Clerk.)

AGREEMENT

Between

Universal Oil Products Company

and

The Roxana Petroleum Corporation

This Agreement, by and between the Universal Oil Products Company, a South Dakota Corporation, with main office at Chicago, Illinois, the party of the first part, hereinafter referred to as the "Universal", and The Roxana Petroleum Corporation, a Virginia Corporation, with main office at St. Louis, Missouri, party of the second part, hereinafter referred to as the "Roxana",

Witnesseth:

That, Whereas, the Universal is the owner of certain United States Letters Patent, and certain patent applications now pending in the United States Patent Office, as follows:

Patent No. 1,123,502, granted to Jesse A. Dubbs, January 5, 1915;

Application, Serial No. 221622, filed March 11, 1918, by C. P. Dubbs;

Application, Serial No. 260954, filed Nov. 4, 1918, by C. P. Dubbs;

Application, Serial No. 260955, filed Nov. 4, 1918, by C. P. Dubbs;

Application, Serial No. 260957, filed No. 4, 1918, by C. P. Dubbs;

Application, Serial No. 266396, filed Dec. 12, 1918, by C. P. Dubbs;

Application, Serial No. 266397, filed Dec. 12, 1918, by C. P. Dubbs;

Application, Serial No. 283673, filed Mar. 19, 1919, by C. P. Dubbs;

and,

Whereas, the Roxana, recognizing and acknowledging the utility of the inventions set forth in the above patents and patent applications as applied to the cracking of oils, is desirous of acquiring a license to use the said inventions

for the purpose of cracking oil, and for no other purpose or purposes.

Now, Therefore, in consideration of the mutual covenants contained herein, the parties hereto have agreed as follows:

1. The Universal does hereby grant to the Roxana a non-exclusive non-assignable license to crack oil (but not for other purposes) by the use of said inventions in the United States and the Territories thereof, and in no other place or places, subject to the terms and conditions herein named to the full extent of the term of any United States Letters Patent now owned by the Universal, or hereafter granted to the Universal on said inventions, or acquired by the Universal on said inventions.

2. The Roxana agrees to pay to the Universal, at its office in Chicago, Illinois, or elsewhere, as the Universal may from time to time request, in writing, a royalty of Fifteen cents (15¢) for each forty-two (42) gallon barrel of oil subjected to said cracking process.

[Note: Paragraphs 3, 4, 5 and 6 deleted by agreement of counsel.]

2449 7. The Universal agrees that the Roxana shall have the right to use any and all improvements in the inventions herein referred to or any of them which are now owned or may hereafter be acquired or controlled by the Universal to the extent of the Universal's interest or ownership therein for the purpose of cracking oil and for no other purpose or purposes, and without the payment of any royalty additional to or in excess of the royalty of Fifteen Cents (15¢) per forty-two (42) gallon barrel herein specified. It is, however, specifically understood and agreed that the said royalty of Fifteen Cents (15¢) per barrel shall apply to each barrel of charging stock or material treated under the process or in the apparatus regardless of whether the charging stock or material is the product of a separate run of charging stock or material by this process or apparatus, or whether it is charging stock or material which has never been subjected to this process or put through the apparatus.

[Note: Paragraphs 8, 9, 10, 11, 12 and 13 deleted by agreement of counsel.]

14. The Universal specifically warrants for the protection of the Roxana to hold the Roxana harmless against any suits for patent infringement arising solely and only from the use of the apparatus erected and operated under

this agreement from plans and specifications furnished or approved by the Universal, and will defend, at its own cost and expense, any and all such infringement suits, provided, however, that the Roxana shall promptly notify the Universal in writing of any such claims for infringement and notice of suit, and provided also that the Roxana shall render the Universal all reasonable assistance that may be required in the defense of suits, the Universal having the exclusive management and control of all such suits at its own expense.

In Testimony Whereof, the parties hereto have caused this agreement to be executed by their duly authorized officers and their corporate seals attached, this 12th day of December, 1919.

Roxana Petroleum Corporation,
By (Sgd.) W. v. Waterschoot
v. d. Gracht,
President.

Attest:
(Sgd.) T. F. Lydon,
Secretary.

Universal Oil Products Company,
By (Sgd.) H. J. Halle,
President.

Attest:
(Sgd.) J. Galther,
Secretary.

State of Missouri, }
City of St. Louis, } ss.

I, Carl Barker, a Notary Public, in and for the state and city aforesaid, do certify that W. v. Waterschoot v. d. Gracht and T. F. Lydon, whose names respectively, as president and secretary of Roxana Petroleum Corporation are signed to the writing above, bearing date on the 12th day of December, have acknowledged the same before me in my city aforesaid.

Given under my hand this 12th day of December, 1919.

My commission expires on the 27 day of June, 1923.

(Sgd.) Carl Barker,
Notary Public.

2450 PX 521-B.

Supplemental Agreement

to

Agreement

between

Universal Oil Products Company

and

The Roxana Petroleum Corporation

For a valuable and sufficient consideration, the recepit of which is hereby acknowledged by the parties hereto, the Universal Oil Products Company, a South Dakota corporation, with main office at Chicago, Illinois, party of the first part, hereinafter referred to as the "Universal", and The Roxana Petroleum Corporation ~~of West Virginia~~, a ~~West Virginia~~ Virginia corporation, with main office at St. Louis, Missouri, party of the second part, hereinafter referred to as the "Roxana", have agreed to the following amendments, supplements, and revisions to a certain memorandum of agreement between the said parties, dated December 12th, 1919, a copy of which at attached to and made a part of this agreement. HJH

1. The Universal warrants that the first still to be erected by the Roxana as specified in Article 10 of the main agreement will produce the following results based on the use of gas oil having a gravity of 32 to 36 Bé produced from Kansas, Oklahoma, or Burkburnett crude oil.

2451 (a) Each 100 gallons of such gas oil run through the Dubbs cracking still referred to will produce 54% or more of pressure distillate, upon which test in a 20 centimeter flask in the laboratory will yield a volume of gasoline distilling off up to a vapor temperature of 360 degrees Fahrenheit equivalent to at least 21% of the gas oil run through the still, and the residue of this pressure distillate will yield by distillation an approximate 40 gravity distillate equivalent to at least 22% of the gas oil run through the still and will leave

the equivalent of at least 7% of the material suitable for recharging into the still and a residuum available for fuel oil purposes of about 22 Bé gravity equal to at least 28%. Both the gasoline and kerosene vapors referred to are to be passed through a condenser immersed in a bath and maintained at a temperature of 60 degrees Fahrenheit during the distillation.

(b) The Universal furthermore guarantees that the apparatus built under the plans and specifications to be furnished by the Universal free of charge to the Roxana is suitable for operating a so-called continuous process and that it will over a period of 90 to 120 days permit of running through at least 2500 barrels of said gas oil used as charging stock, per run, requiring approximately ten days for each said run without serious interruption or the necessity of shut down due to accumulation of carbon or other serious mechanical defect, and also that the apparatus can be shut down, cleaned, and started on a new run within a period of 24 hours.

2. It is understood and agreed that the first still so erected shall over a series of runs as herein specified
2452 operate on and treat a total of 25,000 barrels of said gas oil charging stock to determine whether or not the guarantees herein made are reasonably fulfilled. Both the Universal and the Roxana shall use every effort to complete the running of the 25,000 barrels referred to with the least possible delay.

3. The first unit is to be operated jointly by employees of the Universal and the Roxana under the direction of the Universal, and all of which employees are to be paid by the Roxana. Both Universal and Roxana are each at all times to be represented by a duly qualified person to be selected by the Universal and the Roxana respectively, and it is to be the duty of such representatives to jointly record, tabulate, and sign the results of each day's test, and the Universal and the Roxana are to keep each other informed of all operating conditions. Access to this cracking plant for any party, or parties, whom the Universal may desire, is to be available at all times during such test. The Roxana is to furnish and make available all assistance and facilities for the operations and maintenance.

4. After the foregoing test of 25,000 barrels has been completed, the Roxana and the Universal shall jointly

determine from the records jointly tabulated and signed by the representatives of the Universal and the Roxana, during the test; whether or not the guarantee made, as specified in Articles 1 and 2 of this Supplemental Agreement, have been reasonably fulfilled; and, if they determine that such guarantee has been reasonably fulfilled, then the Roxana shall promptly proceed to erect nine (9) additional stills for the operation of the licensed process and inventions, providing, however, that the Roxana will not be obligated to erect any or all of these additional stills:

2453 (a) if, or as long as sufficient quantity of gas oil at a proper market price is not available for its needs for running through and treating in these stills, or

(b) if, or as long as the relation between the cost prices or market prices of the charging stock, and the selling prices of the gasoline and kerosene, and other products of the process, do not show a profit to the Roxana of at least fifty cents (50¢) per barrel of charging stock, net, after payment of royalties under this license, the calculations of cost of operation to be based on the operation of a battery of not less than five stills, including an allowance of 20% of the first cost of plant for depreciation, interest, and insurance, and a reasonable prospect for the continuance of same for a priod of one year from the time of the written request of the Universal on the Roxana for the compliance with Article II of the agreement referred to herein.

5. In the event it shall be determined that the guarantees as specified in Articles 1 and 2 in the Amended Agreement, have not been reasonably attained, then upon request of the Roxana on the Universal, the Universal shall reimburse the Roxana for the cost of construction of this first still, erected as herein provided and specified, and the Universal is to remove the still from the premises of the Roxana at the Universal's expense, and the Universal is then to have the option upon written notice to the Roxana to cancel the License of December 12th, 1919, between the parties hereto and also to cancel this Amended Agreement.

6. The Universal shall not acquire shop rights or any other rights due to the use by the Roxana in plants

2454 erected under this agreement of any invention or patent now used, owned, or later to be used or acquired by the Roxana.

7. It is mutually agreed between the Universal and the

Roxana under the License Agreement of December 12th, 1919, between the respective parties hereto, that the Roxana shall have the right, and it is hereby granted, for the erection and use of such additional stills or units as it may from time to time require for its needs, aside from the ten units to which the Roxana is limited under paragraph 12 of the License Agreement, but upon the specific condition that the Roxana shall in the erection of such additional stills, comply with the conditions set out in paragraph 9 of the License Agreement, and shall comply with all other conditions under the License Agreement applying to the payment of royalties and the erection and operation of the licensed process and inventions as set forth in said License Agreement.

8. In the event that the Universal make any new agreement during the continuance of this agreement with any third party, which new agreement is more favorable to said third party, then in that event the Universal covenants and agrees that it will immediately amend this agreement or make such new agreement as may be necessary to put the Roxana on an equal footing with said third party.

9. While the Roxana does not agree to operate the plants licensed under this agreement, it is understood and agreed that should the Roxana totally fail to operate these plants so that the Universal would receive no income therefrom during a period of not less than twelve (12) months, that such non-usage shall, at the option of either party upon written notice, act as a termination and cancellation of this contract.

2455 10. It is agreed that the termination of this agreement shall relieve the Roxana from any obligation which may have been imposed either specifically or by implication by the operation of this agreement to further recognize either the utility or the validity of any patents whatsoever.

11. The Universal understands that the Roxana and its affiliated companies are licensed under or own a certain Trumble patent, No. 1,281,884, and the Universal recognizes that the apparatus and process disclosed in said Trumble patent does not infringe the Dubbs patents under which the Roxana is licensed herein, provided said Trumble apparatus is operated and said Trumble process is carried on strictly within the terms of said Trumble patent.

12. The Universal agrees that in the event that it sells said Dubbs patents that it will give the Roxana notice of

its intention to sell at least Fifteen (15) days prior to said sale.

Universal Oil Products Company,
By (Sgd.) H. J. Halle,
President.

Attest:
(Sgd.) J. G. Alther,
(Seal) *Secretary.*

Roxana Petroleum Corporation,
(Sgd.) W. v. Waterschoot v. D. Gracht,
President.

Attest:
(Sgd.) T. F. Lydon,
(Seal) *Secretary.*

2456 State of Illinois, } ss.
County of Cook. }

On this 22nd day of December A. D. 1919, before me, a notary public within and for the county and state aforesaid, personally appeared H. J. Halle, known to me to be the president of the corporation that is described in and that executed the within instrument and acknowledged to me that such corporation executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my notarial seal the day and year above written.

(Sgd.) Frank A. Becker,
(Seal) *Notary Public.*

My Commission Expires January 24, 1923.

State of Missouri, } ss.
City of St. Louis. }

I, Carl Barker, a Notary Public in and for the state and city aforesaid, do certify that W. v. Waterschoot v. d. Gracht and T. F. Lydon, whose names respectively, as president and secretary of Roxana Petroleum Corporation are signed to the writing above, bearing date on the 12th day of December, have acknowledged the same before me in my city aforesaid.

Given under my hand this 23rd day of December, 1919.

(Sgd.) Carl Barker,
(Seal) *Notary Public.*

My Commission Expires on the 27th day of June, 1923.

2457 ABSTRACT OF PX 521 A, B, C.

(A). An agreement dated December 12, 1919 between Universal (South Dakota) and The Roxana Petroleum Corporation, one of the Shell group of oil companies: Universal grants a non-exclusive license to Roxana under Jesse A. Dubbs patent 1,123,502 and seven applications of Carbon P. Dubbs, including the applications which eventuated in the Dubbs patent in suit. Roxana agrees to pay a royalty of 15¢ per barrel of oil treated by the process. Universal gives Roxana the right to use any and all improvements without the payment of additional royalty. Universal agrees to hold Roxana harmless against any suits for patent infringement based on the use of apparatus operated under the agreement and built from plans and specifications furnished or approved by Universal.

(B). An agreement executed December 22, 1919 between Universal and Roxana supplemental to agreement (A) above: Universal makes warranties as to the capacity and yields of the first still to be erected by Roxana for operation under agreement (A). Universal warrants that

"1. (a) Each 100 gallons of such gas oil run through the Dubbs cracking still referred to will produce 54% or more of pressure distillate, which upon test in a 200 centimeter flask in the laboratory will yield a volume of gasoline distilling off up to a vapor temperature of 360 degrees Fahrenheit equivalent to at least 21% of the gas oil run through the still, and the residue of this pressure distillate will yield by distillation an approximate 40 gravity distillate equivalent to at least 22% of the gas oil run through the still and will leave the equivalent of at least 7% of the material suitable for recharging into the still and a residuum available for fuel oil purposes of about 22 Bé gravity equal to at least 28%. Both the gasoline and kerosene vapors referred to are to be passed through a condensor immersed in a bath and maintained at a temperature of 60 degrees Fahrenheit during the distillation.

(b) The Universal furthermore guarantees that the apparatus built under the plans and specifications to be furnished by the Universal free of charge to the

Roxana is suitable for operating a so-called continuous process and that it will over a period of 90 to 120 days permit of running through at least 2500 barrels of said gas oil used as charging stock, per run, requiring approximately ten days for each said run without serious interruption or the necessity of shut down due to accumulation of carbon or other serious mechanical defect, and also that the apparatus can be shut down, cleaned, and started on a new run within a period of 24 hours.

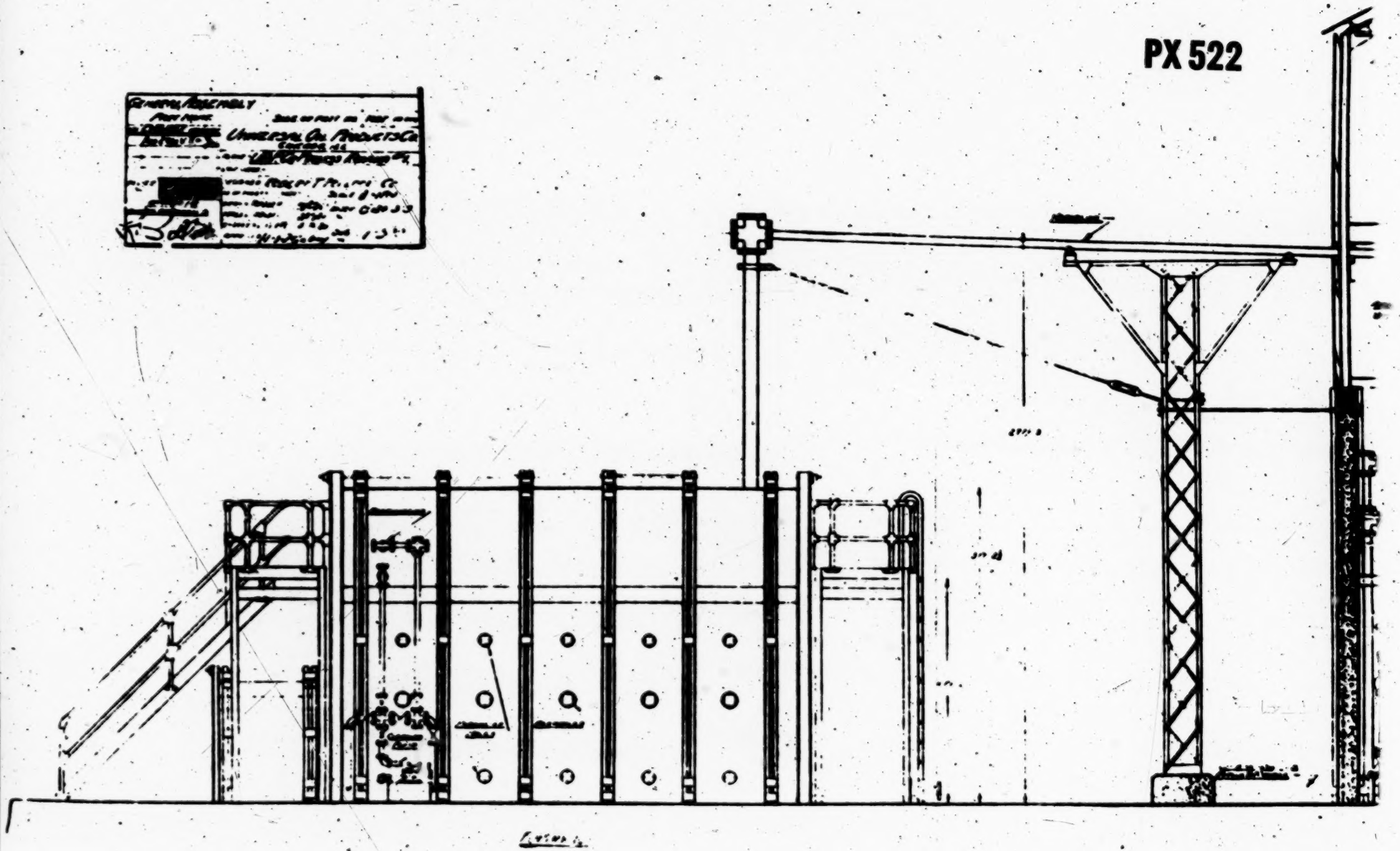
2. It is understood and agreed that the first still so erected shall over a series of runs as herein specified operate on and treat a total of 25,000 barrels of said gas oil charging stock to determine whether or not the guarantees herein made are reasonably fulfilled. Both the Universal and the Roxana shall use every effort to complete the running of the 25,000 barrels referred to with the least possible delay."

The first still is to be operated jointly by Universal and Roxana to determine whether it meets the warranties. If the warranties are fulfilled, Roxana (subject to the existence of certain conditions as to availability of gas oil and selling price of the product) is to build nine additional stills. If the guaranty is not met, Universal is to remove the first still from Roxana's premises and reimburse Roxana for the cost thereof. Roxana is given the right to build and use such additional stills as it may require. Universal agrees to give Roxana the benefit of any more favorable license terms extended to third parties. In the event of non-use of the licensed stills for a period of twelve months by Roxana the agreement may be terminated at the option of either party. It is recognized that Roxana and its affiliated companies are licensed under or own a Trumble patent 1,281,884 and Universal recognizes that the Trumble process, if carried on strictly within the terms of the patent, does not infringe the Dubbs patents under which Roxana is licensed.

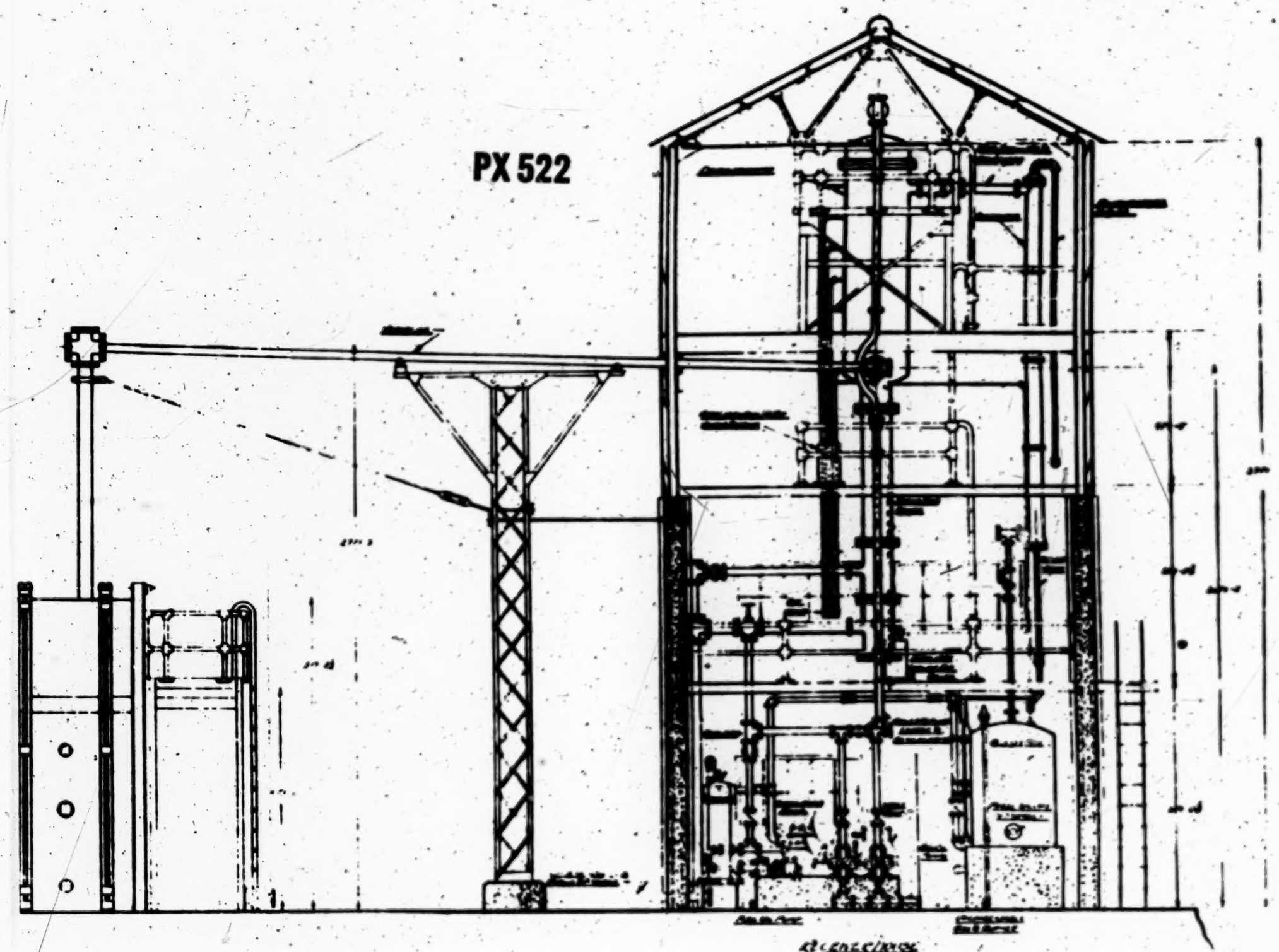
(C). An agreement dated March 31, 1925 between Universal and De Bataafsche Petroleum Maatschappij of Holland (which, with its associated companies, is here called "Shell" or the "Shell Group"): Shell assigns to Universal 11 United States and 52 foreign patents and applications, including Trumble U. S. patent No. 1,281,884, cover-

ing inventions and improvements applicable to the Dubbs cracking process, reserving a license to the Shell Group and reserving the exclusive right to license others for all purposes except the cracking of oil. Shell grants a license to Universal (including the right to sub-license others) under 16 United States patents and 57 foreign patents for use only in connection with the Dubbs cracking process and analogous processes. In case any invention or improvement relating to or applicable to the Dubbs cracking process and analogous processes is developed or acquired by any member of the Shell Group in the United States, the same is to be assigned to Simplex Refining Company, one of the Group. In case any like invention is developed or acquired by any of the Shell Group outside the United States, the same is to be assigned to Sarawak Oilfields, Ltd., one of the Group. Simplex Refining Company and Sarawak Oilfields, Ltd., are in turn to assign the same to Universal in case the invention is primarily applicable to the Dubbs cracking process or analogous processes and only incidentally advantageous to general refinery operations, reserving a license to the Shell Group and reserving the exclusive right to license others for all purposes except the cracking of oil. Or the said companies are to license Universal (with the right to grant sub-licenses) for use only in connection with the Dubbs cracking process and analogous cracking processes in case the invention is primarily applicable to general refinery operations of the Shell Group and only incidentally advantageous for use in connection with the Dubbs cracking process or analogous processes. Universal is to pay to Simplex 25% of the royalties received from the Shell Group in the United States and is to pay Sarawak 25% of the royalties received from the Shell Group outside the United States. In the event that the prevailing royalty in the United States for the use of the Dubbs cracking process is reduced by Universal, the royalty payable by the members of the Shell Group shall be reduced by the amount of the reduction in the rate payable in the United States, provided that the Group as a whole, both within and outside the United States, waive any immunity from the payment of royalty on recycled material which the Group may then be enjoying.

PX 522



PX 522



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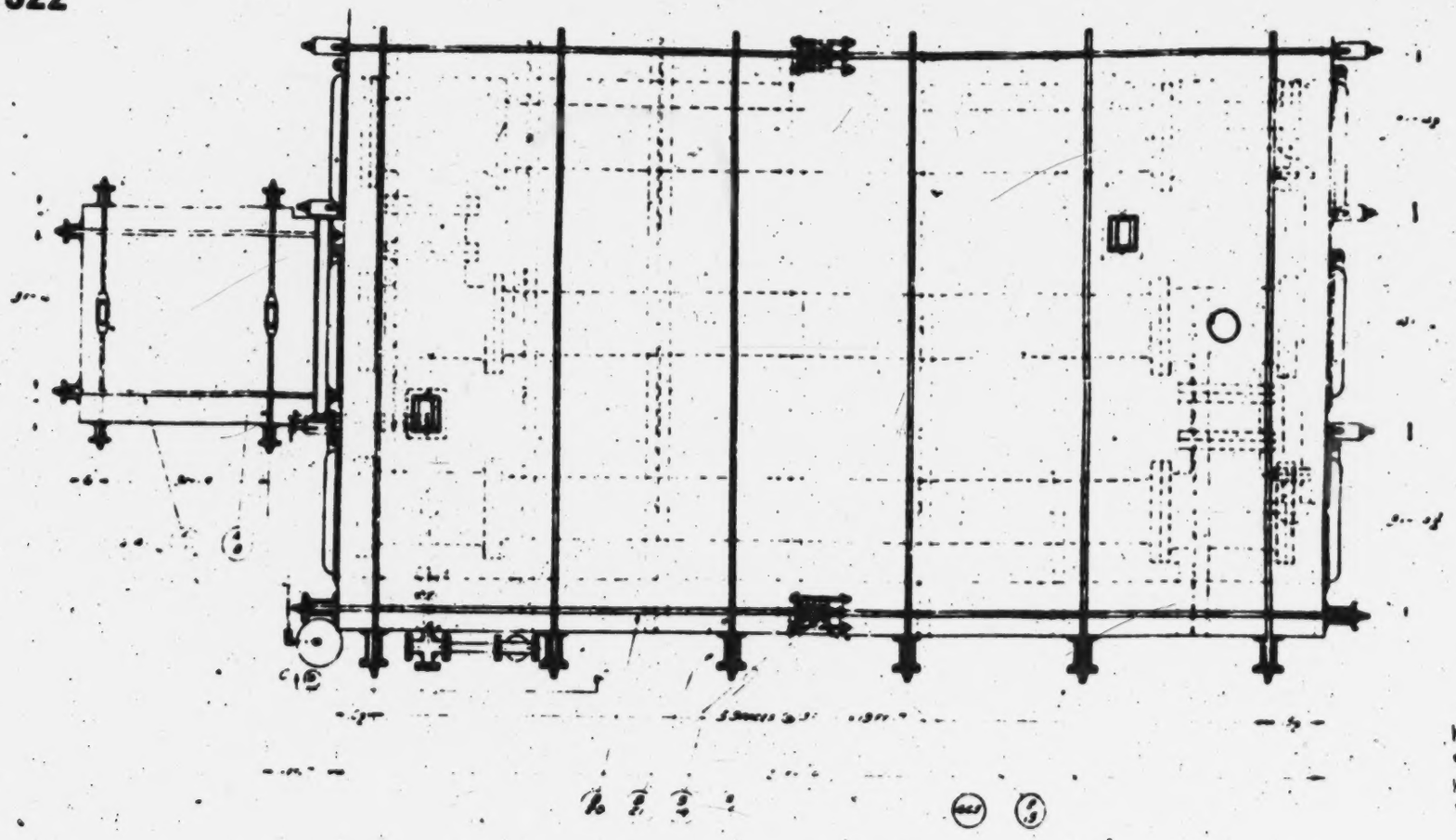

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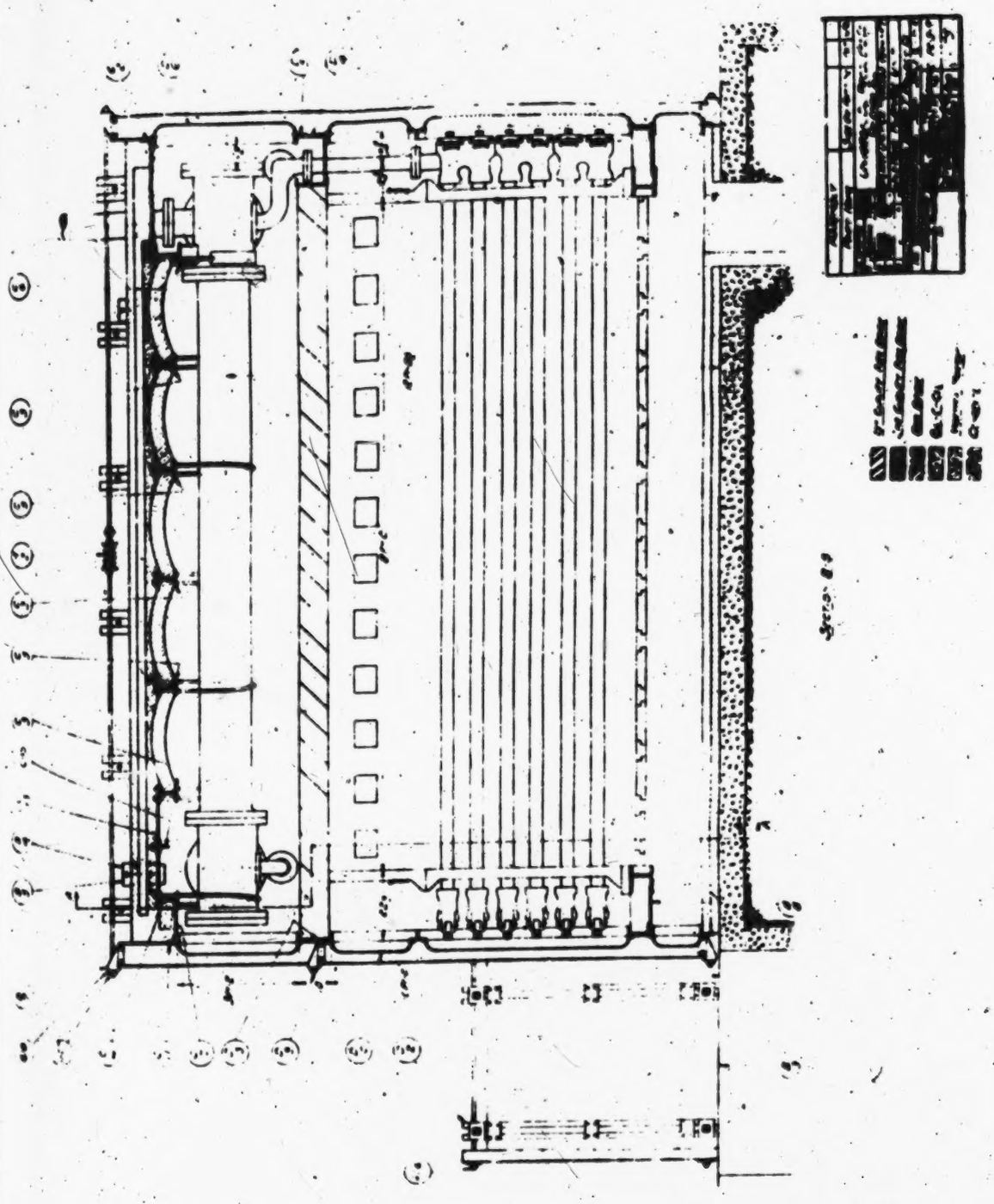
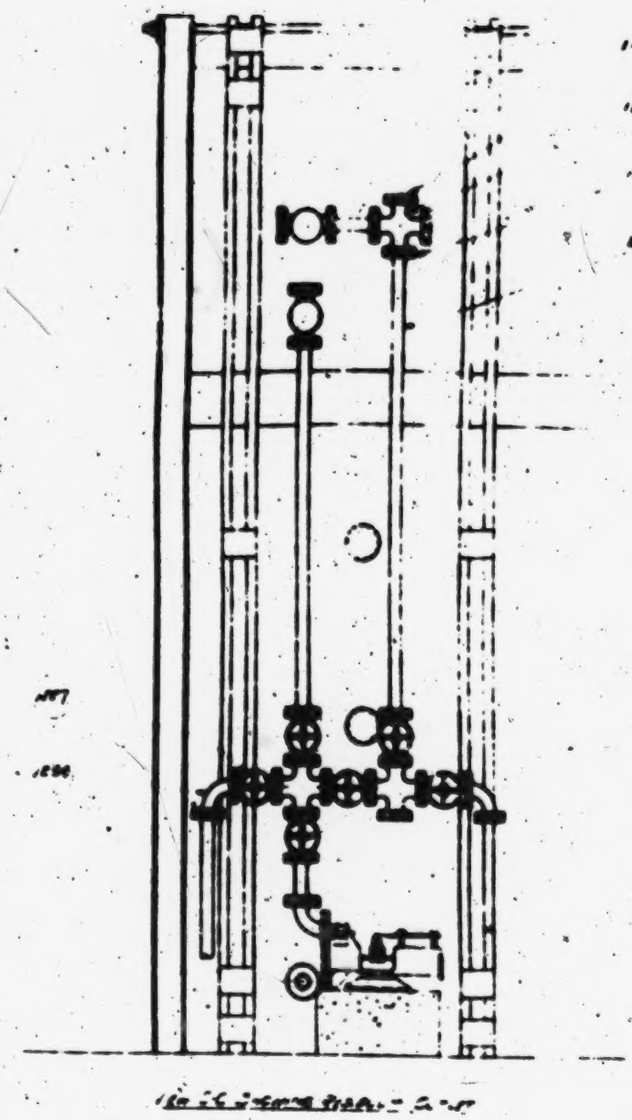




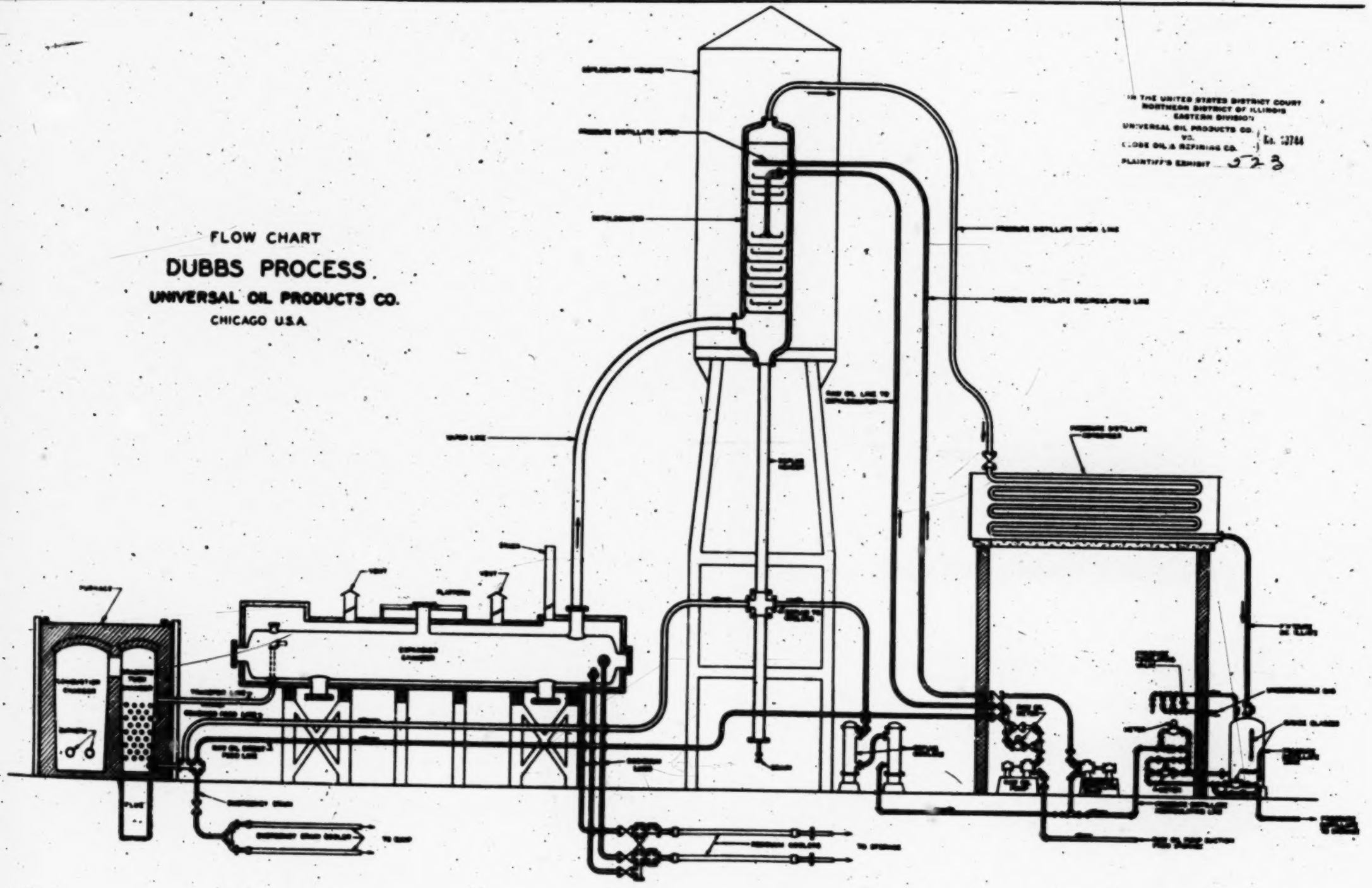
FLOW CHART

DUBBS PROCESS.

UNIVERSAL OIL PRODUCTS CO.

CHICAGO U.S.A.

IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION
UNIVERSAL OIL PRODUCTS CO.
VS.
GLOBE OIL & REFINING CO.
No. 13744
PLAINTIFF'S EXHIBIT 923



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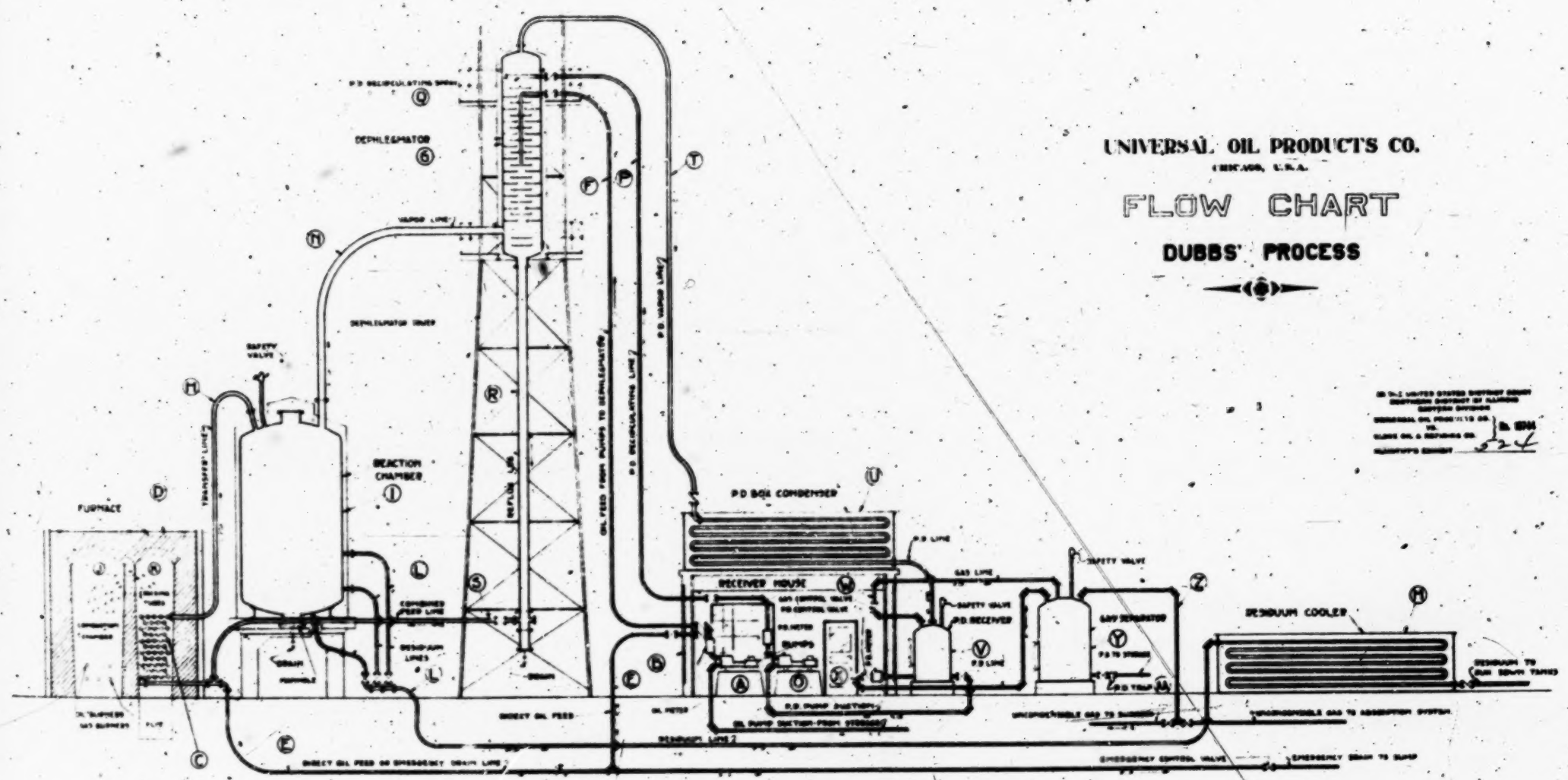


UNIVERSAL OIL PRODUCTS CO.
CHICAGO, U.S.A.

FLOW CHART

DUBBS' PROCESS

UNIVERSAL OIL PRODUCTS CO.
CHICAGO, U.S.A.

FLOW CHART
DUBBS' PROCESS

Dwg No 15207

2521 PX NO. 535.

Richmond, California.
October 1, 1923.

Mr. R. W. Hanna:

The following is in answer to your request to check up the Heat Demands of the Dubbs Cracking Stills.

Conditions from the first case of my letter of September 8th.

Feed 1225 Gallons. per hour. 45 Gravity pressure naphtha 796 Gallons per hour, per cent off 65.

Heat Demands

Heat required for the feed	
$1225 \times 7.556 \times (510\text{-}15) =$	4,581,770
Heat required to evaporate naphtha	
$(796 \times 6.677 \times 90) + (796 \times 6.677 \times (287\text{-}15) =$	1,731,991
Heat required for refluxing	
Heat required for radiation $660{,}000 \times .75 =$	495,000
	6,808,761

Velosity in tubes is approximately 3.7 ft. per second.

They state that the temperature on top of the tubes is 1500° F. The thermocouple is simply put in over the tubes without any shields.

An installation of this kind means that their actual temperature is at least 1800° F.

The tube arrangement with 1800° F. or more on top of the first pass would permit absorbing the necessary heat demand.

Attached are the flow sheets of Dubbs and Hanna Cracking Process. The Dubbs maintain the pressure head on their coil by elevating their tower, the Hanna by a Centrifugal pump. The Dubbs send nothing through their coils but fresh charging stock or reflux stock. The Hanna send fresh charging stock, reflux stock and some tar.

2522 The compartment A from which the pump takes suction contains after a 72 hour run from 300 to 350 lbs. of loose coke.

It is thought that if the compartment A is kept free of coke that the deposit in the tubes would be less. We think

that with the agitation present in Compartment A that considerable of the coke is kept in suspension. The suspended coke comes in contact with the coke in the tubes attaching itself thereto.

The black lines on the print show the position of a baffle, the red dotted line the extension of the discharge line from the tubes. This arrangement we think would have a tendency to make A compartment cleaner.

At one time #4 unit was equipped with a funnel on the end of the discharge line from the tubes, coke was deposited in large quantities inside this funnel hence there must be considerable reaction there.

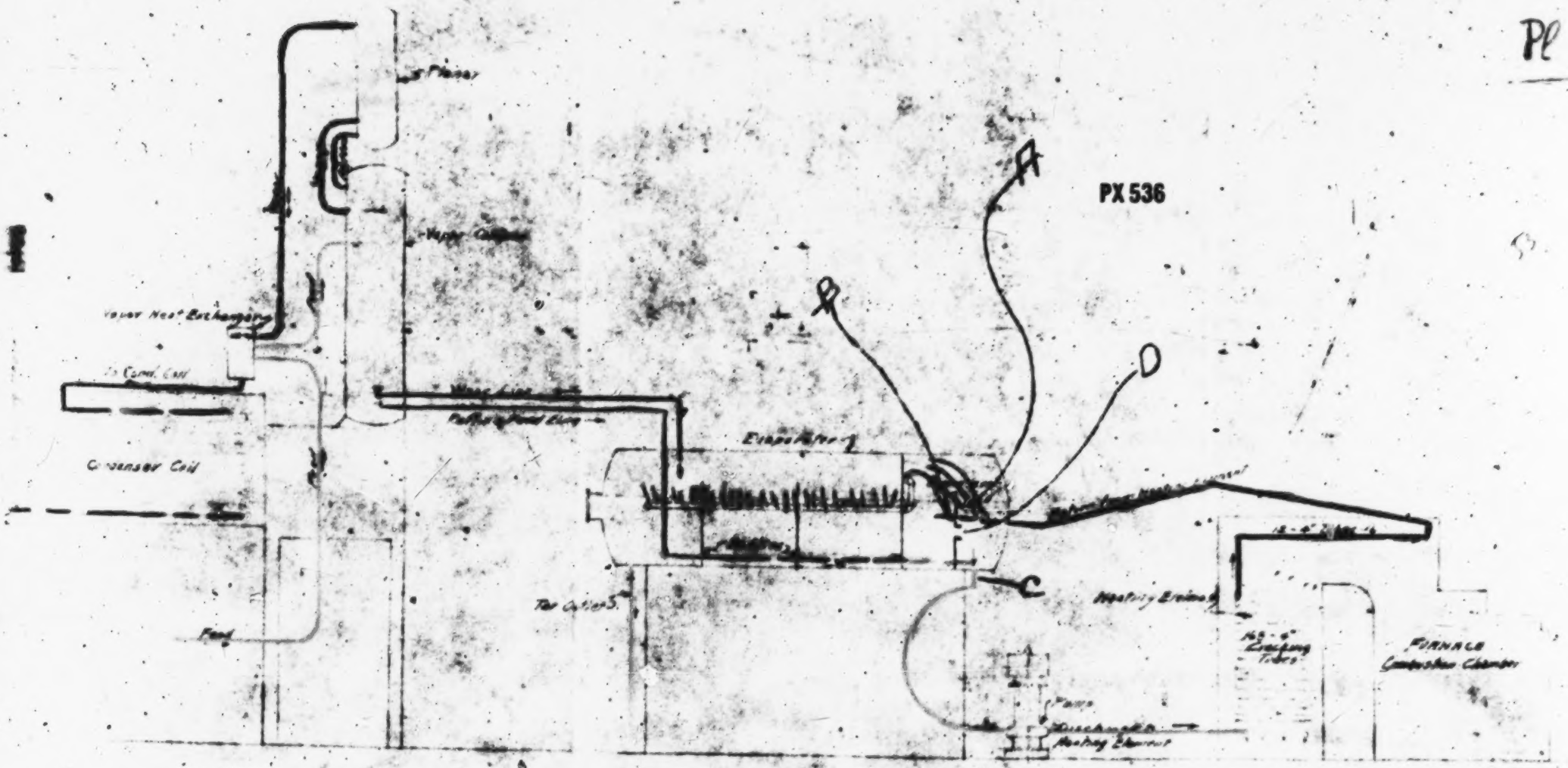
We feel that every effort should be made to keep the A compartment clean.

W. G. Hamilton
W. G. Hamilton

WGH:WD

Pl Ex 11

PX 536



San Francisco,
July 8, 1924.

"Dubbs' Patents"

Mr. R. W. Hanna:

You will recall that in some of the recent studies made by Lyon & Lyon, in their attempt to find prior references which would invalidate Dubbs' patent 1,488,325, they have discovered that Dubbs' patent 1,392,629 is of a broader scope than his patent 1,488,325 on which Mr. Frederick S. Lyon has concentrated his study.

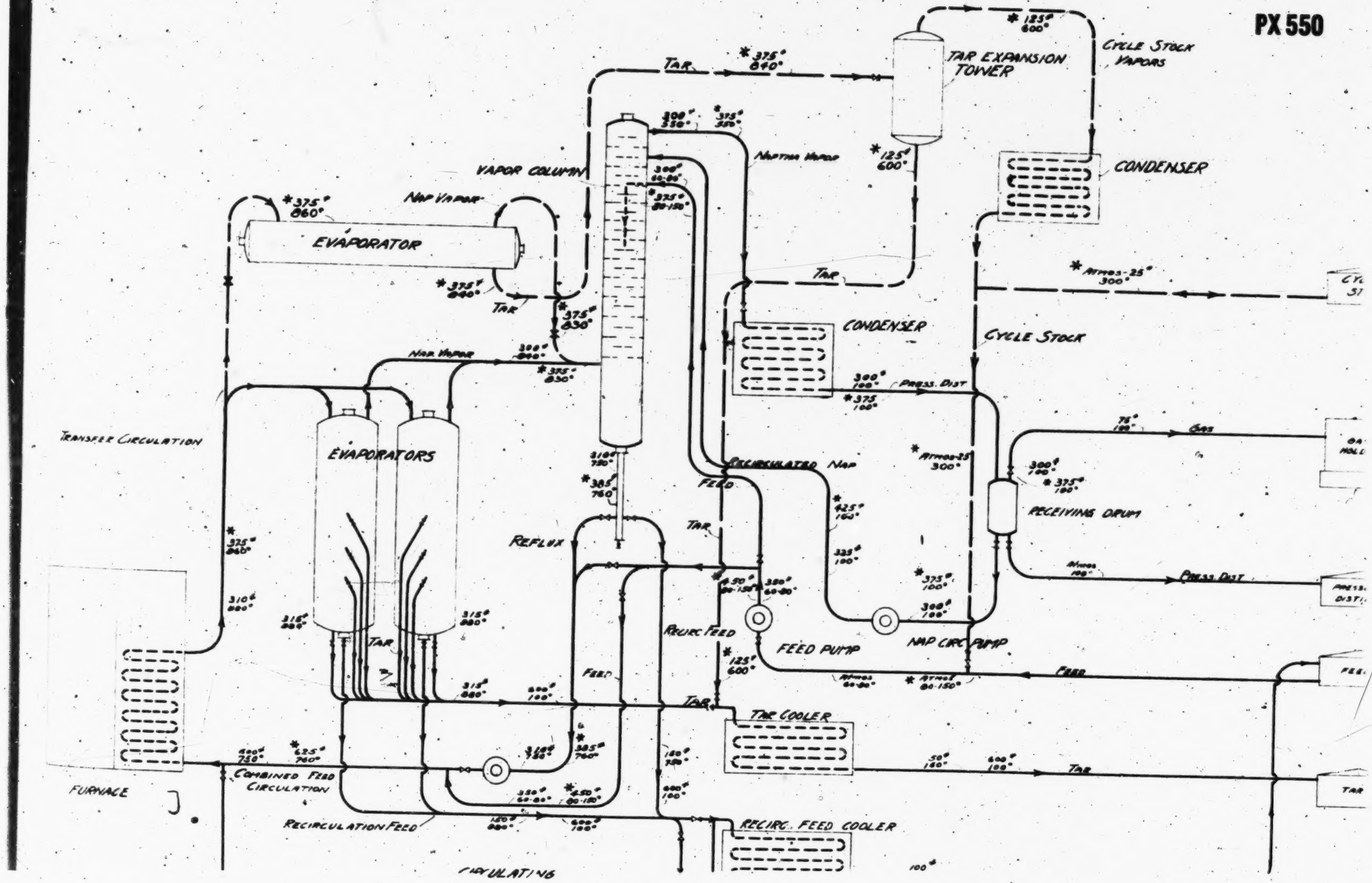
Mr. Leonard S. Lyon, while investigating in the Patent Office records the history of this earlier and broader Dubbs patent, found that it is now in interference with a Texas Company's application filed by Holmes, Manley and Behimer. He has submitted to us a copy of the Patent Office Paper which shows the various counts or points at issue in this interference case.

Mr. Frederick S. Lyon points out in his letter of July 3rd, copy attached, that under the Indiana license we are licensed under this Holmes, Hanley and Behimer application which is in interference with the Dubbs early and broad patent and that, in any consideration that might be given to taking a license under the Dubbs patent, the possibility of Dubbs losing the interference case should be kept in mind.

J. N. Adams.
JNA

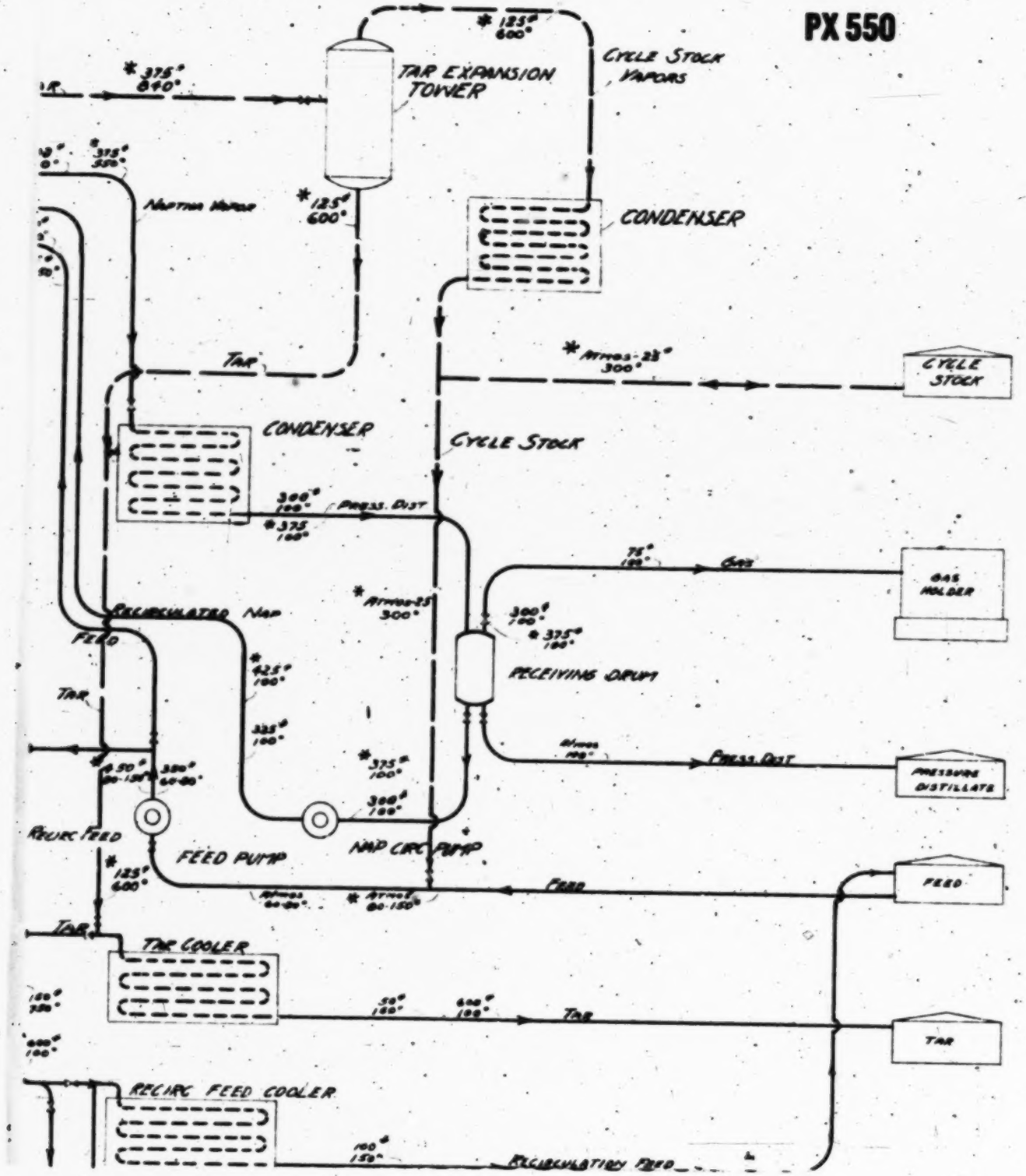
JNA:LJW.
attach.

PX 550


TAR
TAR EXPANSION TOWER
CYCLE STOCK VAPORS
CONDENSER
VAPOR COLUMN
NAP VAPOR
EVAPORATOR
TAR
CONDENSER
CYCLE STOCK
PRESS. DIST
RECIRCULATED NAP
FEED
RECEIVING DRUM
TRANSFER CIRCULATION
EVAPORATORS
REFLUX
RECIRC FEED
FEED PUMP
NAP CIRC PUMP
TAR COOLER
COMBINED FEED CIRCULATION
FURNACE
RECIRCULATION FEED
RECIRC. FEED COOLER
CIRCULATING

PX 550

1765



Temperature & Pressure figures indicated on Equipment correspond to maximum operating conditions. Figures with * indicate conditions for Modified Unit.

REVISIONS
③
②
①

STANDARD OIL COMPANY
ENGINEERING DEPT RICHMOND REFINERY
SCALE — DATE JUNE 8-1926
DR FEP CH JOB ENG'R
REFY. DEPT.
ENG. DEPT.

FLOW DIAGRAM
No 1 UNIT SERIES 1925
PRESSURE STILLS

W.O. S.O. No. B-21026

TAR EXPANSION TOWER

CYCLE STOCK VAPORS

TAR

*375° 840°

300° 350°

*375° 350°

NAPTHA VAPOR

*125° 600°

CONDENSER

VAPOR COLUMN

300° 60-80°

*375° 80-150°

NAP VAPOR

*375° 860°

EVAPORATOR

*375° 840°

TAR

*375° 830°

*ATMOS-25° 300°

CYCLE STOCK

CONDENSER

CYCLE STOCK

NAP VAPOR

300° 840°

*375° 830°

300° 100°

PRESS. DIST

*375 100°

TRANSFER CIRCULATION

EVAPORATORS

3100° 720°

*385° 760°

RECIRCULATED NAP

FEED

*425° 100°

*ATMOS-25° 300°

75° 100°

GAS

GAS HOLDER

300° 100°

*375° 100°

RECEIVING DRUM

*375° 840°

310° 800°

REFLUX

TAR

325° 100°

*375° 100°

ATMOS 80°

PRESS DIST

PRESSURE DISTILLATE

*450° 80-150°

380° 60-80°

RECIRC FEED

FEED PUMP

NAP CIRC PUMP

300° 100°

315° 800°

315° 800°

*125° 600°

FEED

ATMOS 60-80°

*ATMOS 80-150°

FEED

FEED

TAR

TAR COOLER

600° 750°

*625° 760°

3100° 720°

*385° 760°

150° 750°

50° 100°

600° 100°

TAR

TAR

FURNACE

COMBINED FEED CIRCULATION

600° 100°

RECIRC FEED COOLER

RECIRCULATION FEED

120° 800°

600° 100°

100° 150°

RECIRCULATION FEED

CIRCULATING PUMP

100° 600°

75 700°

600° 100°

WASTE TO MARSH

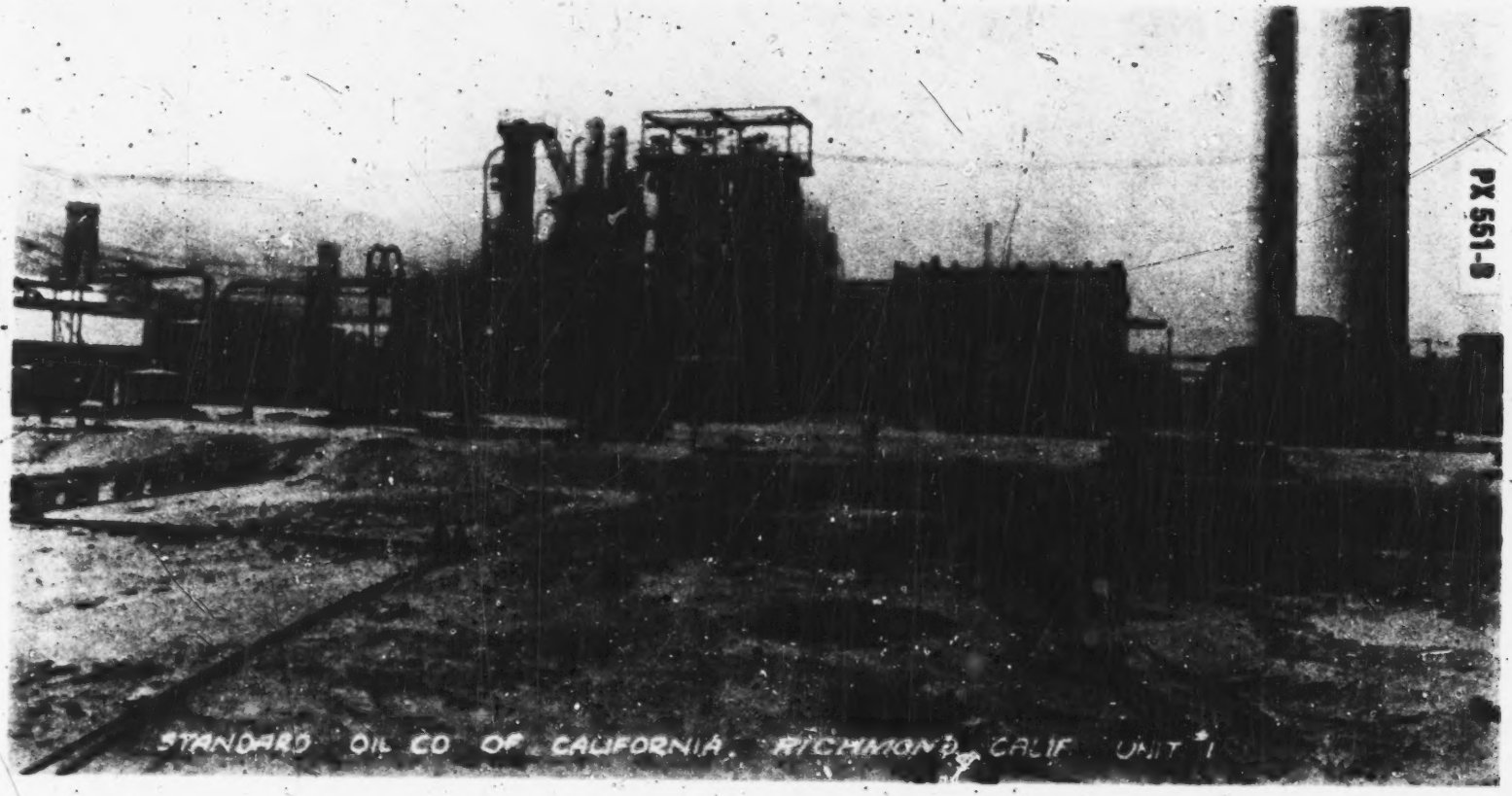
SUMP

100° 650°

PUMP OUT TO STORAGE & MARSH

600° 650°

PX 551-A



PX 551-B

(Y)

2528 PX 552.

390

DEPARTMENT OF COMMERCE

United States Patent Office

To all persons to whom these presents shall come, Greeting:

This Is To Certify that the annexed is a true copy from the records of this office of the File Wrapper, Contents and Drawing, in the matter of

Pending Application of

Ralph A. Halloran and Archie L. Strout,

Filed March 21, 1927, Serial Number 176,990,

Renewed May 9, 1929,

for

Improvement in Process of Decomposing Relatively High Boiling Point Oils Into Relatively Low Boiling Point Oils.

In Testimony Whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington, this twenty-first day of October, in the year of our Lord one thousand nine hundred and thirty-six and of the Independence of the United States of America the one hundred and sixty-first.

Conway P. Coe,

(Seal) *Commissioner of Patents.*

Attest:

D. E. Wilson,

Chief of Division.

2531 (Stamps) Mail Room Mar 21 1927 U. S. S. Patent Office Paper No. Mar 25 1927 Division 81.

PETITION AND POWER OF ATTORNEY

To the Hon. Commissioner of Patents:

Your petitioners, Ralph A. Halloran and Archie L. Strout, citizens of the United States, both residing at Berkeley, in the County of Alameda, and the State of California, whose post-office addresses are c/o Standard Oil Company, Standard Oil Building, San Francisco, California, pray that letters patent may be granted to them for the Process of Decomposing Relatively High Boiling Point Oils Into Relatively Low Boiling Point Oils, set forth in the annexed specification, and they hereby appoint the firm of

Lyon & Lyon

(the individual members of which firm are Frederick S. Lyon and Leonard S. Lyon), 708 National City Bank Building, Los Angeles, California their attorneys, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent and to transact all business in the Patent Office connected therewith.

Inventor sign full name:
Ralph A. Halloran
Archie L. Strout

SPECIFICATIONS.

To All Whom It May Concern
Be it known that

2

2532 We, Ralph A. Halloran and Archie L. Strout, citizens of the United States, both residing at Berkeley, in the County of Alameda, State of California, have invented a new and useful Process of Decomposing Relatively High Boiling Point Oils Into Relatively Low Boiling Point Oils, of which the following is a specification:

This invention relates to an improvement in the art of converting relatively high boiling point hydrocarbon oils into oils of relatively lower boiling point constituents, commonly referred to as the progenetic cracking of oils, and has to do more particularly with a vaporization type of cracking process wherein the oil, heated to a cracking or decomposing temperature, is passed

into an enlarged reaction chamber wherein vaporization takes place and from which chamber the vapors are withdrawn as distillation products while the liquid is withdrawn as heavy residuum.

As ordinarily practiced there is obtained by a vaporization type of process and from the vapors evolved and removed from the reaction or vaporization chamber the desired low boiling point or gasoline-like products and a reflux material, which latter stock is usually returned to the heating zone for retreatment, it being well known and established that by the retreatment of this reflux material the total yield of low boiling point constituents is materially increased. In instances wherein the vaporization has not been carried to the point where

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2533 substantially solid or semi-solid cokey material remains, it has been common practice to withdraw the heavy residuum, usually continuously, from the vaporization chamber and to use the same as a heavy liquid fuel oil.

In attempting to operate in accordance with the above outlined procedure and particularly on California or asphaltic base oils, it has been found that the heavy residuum produced and withdrawn from the system for use as a liquid fuel is so high in sediment content that it would not meet the specifications required for a fuel acceptable to the general market. In addition to this inherent disadvantage, it has also been found that excessively large quantities of coke were formed within the system when reasonably high yields of gasoline-like or low boiling point constituents were obtained.

In the vaporization type of cracking process as heretofore carried out, it has been the practice to maintain the material within the vaporization chamber at an A. P. I. gravity much lower than the feed oil, and it has been attempted to keep the oil subjected to the treatment therein for a long period of time. Vertical drums are often employed in reaction and vaporization chambers and resort is had in some instances to agitation of the material within the vaporization chamber in conjunction with the prolonged period of time during which the liquid remains therein. In these vertical types of vaporization

or reaction chambers, the flow of material from the inlet to the discharge end is irregular so that a part of the material is subjected to treatment for a period of time

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2534 considerably in excess of the average time the material remains in the reaction chamber. In other words, as heretofore practiced there has been a absence of definite control of the flow of material through the vaporization chamber from its point of entrance to the point of withdrawal of the heavy residuum therefrom.

It is an object of this invention to provide a vaporization type of cracking process whereby a high yield of low boiling point or gasoline-like constituents may be obtained while at the same time producing a heavy liquid residuum which may be withdrawn from the system and which will be sufficiently low in sediment content as to meet the specifications required for a marketable fuel oil.

Another object of this invention is to provide a process of this type by which high yields of gasoline-like constituents can be obtained while at the same time materially reducing the amount of coke formation which has attended the vaporization types of processes as heretofore practiced.

The vaporization process of cracking hydrocarbon oils generally requires the recycling of a very large amount of oils which are obtained as reflux from the vapors evolved in the reaction chamber. The ratio between the amount of stock to be recycled and the amount of fresh stock to the process ranges generally from 3 to 5 parts cycled stock to 1 part of fresh oil. This necessarily imposed a large heat demand on the cracking system. It is therefore another object of the present

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2535 invention to provide a process of this type by which high yields of low boiling point or gasoline-like constituents may be obtained while at the same time materially reducing the quantity of stock necessary to recycle in the system and thus reduce the heat demand on the system.

Other objects and advantages will be apparent from a description of the invention which is hereinafter set forth.

We have discovered that the sediment content of the residuum produced by the system and also the quantity of coke formed while making a given yield of low boiling point or gasoline-like constituents is a function of and directly dependent upon the gravity of the liquid oil maintained within the reaction or vaporization chamber. For example, in cracking a charging stock obtained from a California oil it is desirable to produce a heavy fuel oil residuum of about 9° A. P. I. gravity. A liquid residuum having such a gravity and at the same time being satisfactory as to sediment content can be produced by withdrawing from the reaction or vaporization chamber a liquid which is materially higher in A. P. I. gravity than the desired liquid residuum, and by evolving from said liquid so withdrawn from the vaporization chamber the lighter components until the residuum thus left is of the desired 9° A. P. I. gravity. By returning to the system as a cycle stock or additional charging stock, the distillate which is thrown over during this last mentioned step and subjecting the same to retreatment throughout the system, the desired high yield of low

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2536 boiling point constituents is obtained. Thus, instead of reducing the liquid oil contents within the reaction or vaporization chamber to the low A. P. I. gravity of the desired fuel oil residuum ultimately to be withdrawn from the system as has attended the prior vaporization types of cracking processes, our invention comprehends the withdrawal of the liquid oil contents from the vaporization chamber while of a lighter or higher A. P. I. gravity than the fuel oil residuum ultimately desired, distilling said liquid contents until the desired heavy residuum is produced therefrom, and returning to the system as cycle stock the constituents obtained through the distillation of the relatively high A. P. I. gravity liquid withdrawn from the reaction chamber.

We have found that the best results are obtained by maintaining a relatively small amount of oil within the reaction or vaporization chamber. By reducing the amount of oil within the vaporization chamber the time element to which the charging stock is subjected in passing once through the reaction chamber is reduced, thus tending to reduce the production of gasoline-like constituents. To compensate for this reduction and thereby maintain a

desired high yield from the oil charged to the system, we employ in connecion with the relatively small amount of oil maintained in the vaporization chamber a higher degree of temperature when passing the oil through the heating coils of the system. Thus by increasing the rate of cracking within the coils we compensate for the loss due to reduction in the reaction in the reaction chamber. Moreover, by reducing the amount of oil within the vaporization chamber the time element to which the heavy residuum formed
is subjected is also materially reduced. This results in a
7
2537 reduction in the amount of coke and sediment formed.

Apparently, when the heavy residuum formed is maintained
for a long period of time at the high temperature of the cracking reaction, said heavy residuum degenerates into a material amount of coke and sediment. The process of the present invention has the advantage that the residuum formed by the evolution of the low boiling point constituents
is withdrawn more rapidly from the zone of reaction.

In maintaining the oil content of the vaporization chamber at a relatively high A. P. I. gravity, we have found it advantageous and desirable at times to maintain a relatively high pressure upon the system and particularly upon the vaporization chamber. Pressures thus employed will generally range upwards from 250 lbs. per square
inch, and when such relatively high pressure is used, distillation of those ingredients heavier than the desired low boiling point constituents will be suppressed to such an extent that for the same yield of gasoline-like bodies a smaller
quantity of vapors will pass from the vaporization chamber to the fractionating element of the system, thus leaving a larger percentage of the oil fractions in a liquid state within the vaporization chamber. This assists in raising the gravity of the total stock within the reaction or vaporization chamber, and at the same time reduces the heat requirements for re-vaporizing reflux material.

The degree of A. P. I. gravity at which this stock
is maintained will depend upon the yields desired, the extent

to which it is desired to reduce the sediment content of the fuel, and the extent to which it

8

2538 is desired to reduce the amount of coke formed by the cracking process. Furthermore, the actual gravity of the
stock maintained within the evaporator for any particular pressure will depend upon the gravity of the charging stock used, the yields of gasoline-like constituents obtained and the rate of production of gasoline-like bodies for any particular size of unit. The higher the A. P. I. gravity of the oil maintained within the evaporator the greater will be the improvements in the sediment and coke conditions hereinbefore referred to.

The invention may be better understood and comprehended in its various aspects in connection with a description of a process embodying the invention and by reference to the accompanying drawings which illustrate an apparatus in which a process embodying the invention may be performed. The indicated apparatus is given for illustrative purposes only and it is to be understood that the arrangements shown and the details of construction illustrated may be widely varied without departing from the scope of our invention. Those versed in the art fully understand the methods of calculating to determine the sizes of the different parts of apparatus suitable for the particular operation they may desire to follow in the use of this process.

In the drawing, the apparatus is illustrated in diagrammatic elevation.

In the drawing, 1 represents a feed line through which fresh feed stock from storage or other suitable source may enter the system where it is passed by means of pump 2

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2539 through valve 3 and line 4, thence through auxiliary or
secondary pumps 5 and 6 and line 7 into heating coils 8 which are provided in a suitable furnace 9 where the oil receives its heat and is raised to the desired temperature. As an example of a suitable temperature, we generally
employ a temperature around 850° F. to 890° F. when processing a

gas oil fraction of a California base oil. The temperature may be modified, depending on the character of oil processed as well as the quantity and quality of the products to be produced. It is then passed through line 10 into a vaporization and reaction chamber 11 which preferably is a relatively long and narrow cylindrical drum, mounted preferably in a horizontal position. Other types and arrangements of vessels may, however, be employed in lieu of the horizontally placed vaporization chamber. The horizontal type of reaction chamber has the advantage of insuring that all portions of oil will pass through the reaction chamber at more nearly the average time, thus tending to eliminate any part of the oil remaining therein an excessive time and degenerating into coke and sediment.

From the vaporization chamber 11 the vapors pass through vapor line 12 into a dephlegmating tower 13 which may be one of several different and suitable types. In this dephlegmating tower the desirable lighter or gasoline-like constituents will be separated from the heavier constituents and will pass in vapor form through line 14 controlled by valve 15, and thence through suitable condensing apparatus such, for example, as condenser coil 16. The condensate thus formed then passes through line 17 into receiving drum 18 where any relatively fixed or in-

10

2540 condensable gas is permitted to separate therefrom. This gas may be led off through valve 19 and line 20 and conducted from the system. The condensed gasoline-like or low-boiling-point constituents will pass through line 21 provided with valve 22 and thence through line 23 to suitable storage not shown in the diagram. Thus the full pressure of the system may be imposed on the products during the condensing and cooling process.

The residuum withdrawn from evaporator 11 passes through pressure release valve 24 thence through line 25 and is discharged into vessel 26. The release of pressure through valve 24 is as a rule sufficient to permit of the vaporization from the hot liquid residuum, immediately upon its discharge into vessel 26, of

sufficient of the volatile ingredients thereof to reduce
the residuum to the gravity of the fuel oil desired. The vapors are thus evolved under their residual heat.
The constit..ents evolved will comprise a quantity of
material whose boiling points are higher than those of
the constituents vaporized in the vaporization chamber
11. This material may be used as a cycle stock for further cracking. It will be obvious that the quantity
of vapors evolved in distillation vessel 26 will vary,
along with other factors, with the pressure carried therein
and that the boiling points and gravity of the residuum
may be varied and controlled accordingly. The pressure
held within the distillation vessel 26 is controlled by
valve 29. Pressure may be carried above or below atmospheric and steam, either in open or closed coils, as

11

2541 well as fired heating of the vessel 26, may be used to produce the desired results. It will further be understood that any suitable fractionating equipment may
be employed in conjunction with the distillation element
26, and that refluxing by the use of a cooling medium or
by the injection or intermingling of a suitable stock
such as a part of the cycle stock already condensed may
also be employed. In a co-pending application
Insert A¹(A¹) there is
described a process by which a large part of the heat

in the cycle stock vapors is recovered, thus materially
reducing the heat demands.

In the method as herein illustrated, these cycle stock vapors are then passed through line 27, thence through condenser coil 28 and valve 29 where they may in turn be joined with the fresh incoming feed passing through line 4. By a suitable arrangement of valves and lines, it will be evident that this cycle stock material may, if desired, be transferred to storage such as that shown in tank 30, from which it may later be withdrawn and used, as a feed stock to the heating coils. Such heavier constituents as are separated from the gasoline-like vapors in the dephlegmating tower 13 are passed through line 31 where they join the fresh feed stock and pass through pump
6 and line 7 for retreatment through the system.

In the operation of our process, we are able to maintain a liquid oil content within the vaporizing chamber 11 which has a relatively high A. P. I. gravity. In fact, we are able to maintain the gravity of the liquid oil within this evaporator but slightly below the gravity
12
2542 of the feed oil charged to the system. For example, in
feeding to the system as charging stock gas oil produced from California crude and having a gravtiy of 24.5° A. P. I. we have maintained in the vaporization chamber 11 a liquid
residuum ranging in some instances from 16° A. P. I. gravity
to 23° A. P. I. gravity depending upon the conditions of pressure
and temperature employed therein while producing yields of
low-boiling-point constituents equal to and in certain instances in excess of yields of the same kind of products obtained under vaporization types of cracking processes as heretofore practiced. In all cases it is preferable to maintain the gravity of this residuum above 16° A. P. I. and,
when permitted by the gravity of the charging stock fed to the system, the yield of low-boiling-point constituents obtained, the rate of running as well as the temperature

and pressure conditions, we prefer to maintain this residuum considerably higher such as, for instance, from 21° to 24° A. P. I. gravity.

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2543 As an example illustrating the improvements effected by the process of the present invention as compared with cracking processes of the vaporization type in operation prior to the present invention, the following data are given which data have been taken during commercial runs, part of the data being taken from a well known prior type of vaporization process for cracking oils and part being taken from actual commercial runs of the process covered by this invention.

	Conventional Vaporization Cracking Process	Process of This Invention
Gravity of California Gas Oil charged to the system	25.0°A.P.I.	25.0°A.P.I.
Gravity of liquid withdrawn from vaporization chamber	9°A.P.I.	19°A.P.I.
Produced Low Boiling Point Constituents (Naphtha) of approx. 54° A.P.I. Gravity	53%	53%
Coke Formed in Lbs. per gallon of Naphtha	.35	.006
Sediment in the Fuel Oil Residuun. Withdrawn from System	3.0%	.15%
Gravity of the Fuel Oil Residuum Withdrawn from the System	9. A.P.I.	12.3°A.P.I.

To one versed in the art it is apparent that by further distilling the liquid withdrawn from the vaporization chamber 11 so as to give a fuel oil residuum heavier than that of 12.3° A. P. I. gravity shown above, the yield may be increased over that given above for this invention because in this way more cycle stock would be produced

for re-cracking. It is also true that the process can be run to
additional yields by permitting a somewhat greater formation of coke
and sediment than that shown in the example above while at the same
time keeping the coke and sediment within permissible limits, say .1
lb. of coke per gallon of naphtha and .5% of sediment in the fuel oil
residuum.

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2544 When the process of the present invention is practiced with a horizontal drum for the vaporization chamber 11 there
is a definite control obtained over the flow of the oil through the vaporization chamber 11 and to the point of discharge. This
is made possible by having an undistributed flow of the oil from
one end to the other, thus permitting accurate control of the time
each portion of the oil remains in the vaporization chamber. There
is thus reduced the tendency for cracked tar which is formed within
the vaporization chamber to degenerate into coke and sediment
because there is eliminated the possibility of a portion of the oil
remaining in the vaporization chamber for an unduly long period of
time. Likewise, there is eliminated the likelihood of other portions
of the oil being discharged from the vaporization chamber in so short
a time that there is not evolved therefrom the full amount of desired
low boiling point constituents contained therein. This feature is
further emphasized by a technical study or mathematical consideration
of the time during which various portions of the oil may remain in

a vertical type of evaporator, the calculations having been made under
the assumption that agitation also takes place within said vertical
drum. Such an analysis shows that only 36% of the oil will remain in
the evaporator for a period of the time equal to the average time occupied
by all the oil passing therethrough and that therefore 64% of the oil
will be discharged from the evaporator before it has been there for
the average length of time. This means that some of the oil remains
in the evaporator for an unduly long period of time and long after all
of the constituents desirable as volatile matter have been driven
therefrom with the result that there is formed an undue amount of coke
and high degree of sediment in the resulting fuel oil residuum, and
conversely that there will be discharged from said evaporator in a
relatively short period of time a material amount of oil from which
very desirable volatile constituents could be evolved with little
resulting formation of coke or sediment.

15

2545 It will be well understood by those versed in the art that in order to realize the benefits of this invention to
the fullest extent it will be desirable to use high pressures in
order to prevent the vaporization of an excessive amount of fractions
heavier than the desired low boiling point constituents and the
consequent passing the evolved vapors of said fractions to the
fractionating column for condensation as reflux material later to
be again re-vaporized as cycle stock; and that when the higher

pressures are employed certain advantageous features inherent in
the invention will be emphasized to a greater degree, particularly
the maintaining of the liquid contents within the vaporization
chamber 11 at a lighter or higher A. P. I. gravity, thereby reducing
the tendency to form coke and sediment, and secondly, the reduction
of the fuel burden upon the system through the avoidance of the
re-vaporization of an excessive amount of reflux material. In
practice this invention has been operated with successful results
at pressures as low as 200 lbs. per square inch and improvements
in the degree of benefits accruing from the invention have been
experienced as pressures were increased.

It will thus be seen that the process of the present invention provides a means by which hydrocarbon oils may be cracked to produce high yields of desired low boiling point constituents, while at the same time producing a fuel oil of desired low sediment content, and furthermore, that this is accomplished with a material reduction in the production of coke.

While in the preferred embodiment of our invention we have illustrated and described that the fresh feed is introduced directly into the heating coil, it is obvious that any desired portion of the feed may be employed for cooling purposes by introducing the same into the dephlegmating tower 13. In such

16

2546 modification line 32 and valve 33 may be employed for so conducting desired portions of the feed, valve 3 being closed should it be

desired that all of the feed be introduced into said dephlegmating
Insert A^2 tower by way of line 32 (A^2). It will also be understood that such
quantities of feed so used for cooling purposes may be introduced
into the tower by spraying thereinto or by conducting it through
closed coils for heat exchange purposes either therein or in other
suitable manner.

It is understood that the process of the present invention may be performed in an apparatus which includes a battery of like
sets of apparatus, and that the cycle stock material from one unit
of such a battery may, if desired, be recycled to the reaction and
vaporization chamber of another unit of the series. Moreover, the
distillation chamber 26 may serve a plurality of vaporization and
reaction chambers.

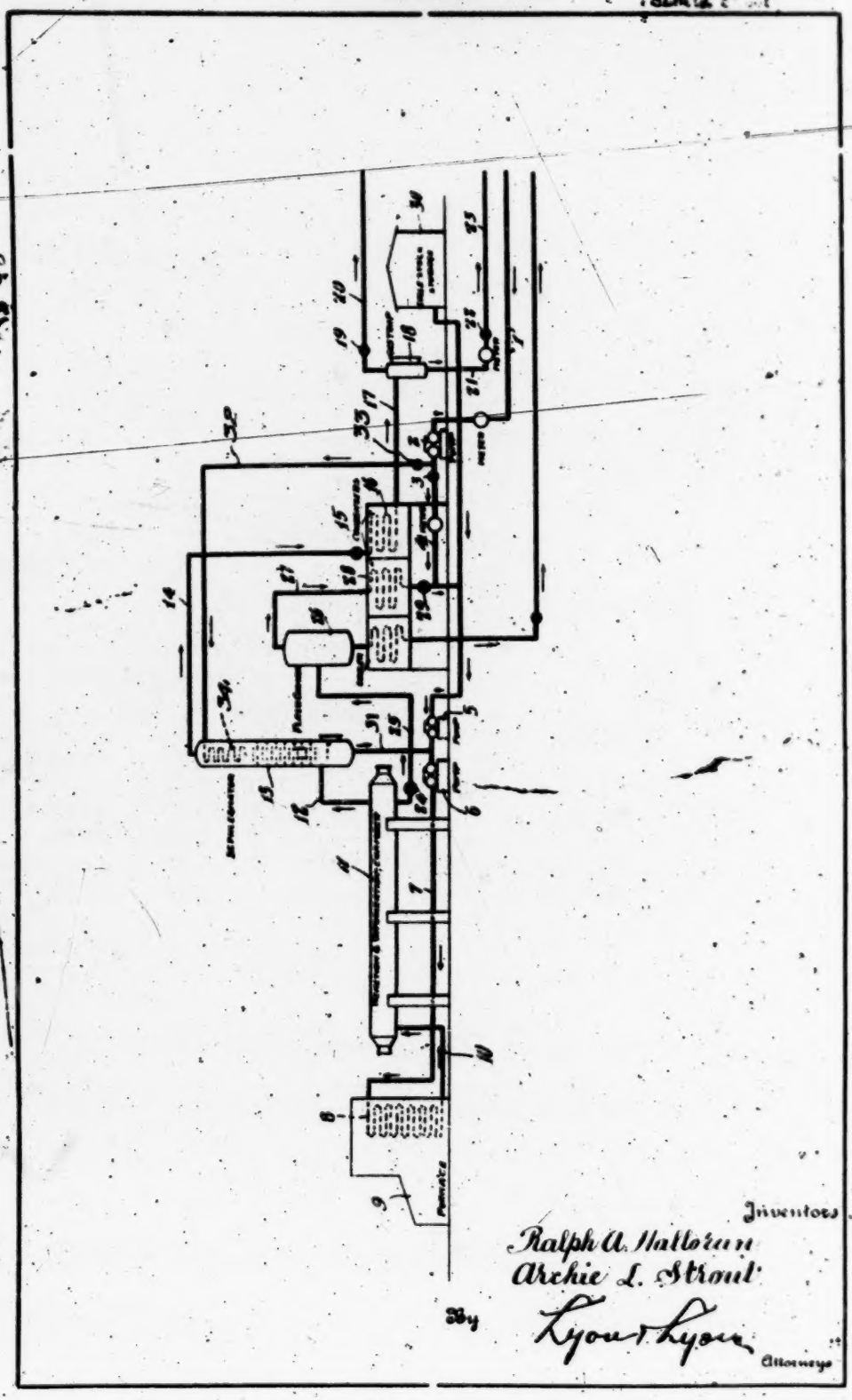
The process is capable of numerous other modifications and
is not therefore limited to the particular embodiment described
for illustrating the invention, but is of the scope set forth in
the accompanying claims.

17

RENEWAL

176990

Div 31



Inventors
Ralph A. Matloran
Archie L. Stroul
By Lyon & Lyon
Attorneys

MAY 1 0 1927

2690 PX 566.

Form 788

UNITED STATES DISTRICT COURT

Northern District of Illinois.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922
42
(~~41~~ Stat. L.....), you are advised that there was filed on the 26th day of January, 1926, in this court an action, suit, or proceeding No. 5560, entitled:

Name Universal Oil Products Co., Plaintiff,
Address Chicago, Illinois.

versus

Name Texas Company, Defendant,
Address Lockport, Illinois.

brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,392,628	Oct. 4, 1921	Carbon P. Dubbs
3.	1,440,772	Jan. 2, 1923	Carbon P. Dubbs
4.	1,484,445	Feb. 19, 1924	Carbon P. Dubbs
5.	1,488,325	Mar. 25, 1924	Carbon P. Dubbs
6.	1,522,425	Jan. 6, 1925	Carbon P. Dubbs
7.	1,525,281	Feb. 3, 1925	Carbon P. Dubbs
8.	1,517,830	Dec. 2. 1924	Gustav Egloff and Harry P. Benner
9.	1,546,634	July 21, 1925	Carbon P. Dubbs
10.	1,550,607	Aug. 18, 1925	Carbon P. Dubbs
11.	1,568,400	Jan. 5, 1926	Carbon P. Dubbs
12.	1,550,568	Aug. 18, 1925	Robert T. Pollock
1.	.....	.....	.....
2.	.....	.....	.....
3.	.....	.....	.....
4.	.....	.....	.....
5.	.....	.....	.....

2691 In the above-entitled case the following decision has been rendered or decree issued: _____

_____

_____

In Witness Whereof I have affixed my hand this 20th day of February, 1926, at Chicago, Illinois.

Charles M. Bates,
Clerk of said Court.

(In pencil): 283673-50

2692 PX 567.

(Stamp) Mail Room Sep 28 1926 U. S. Patent Office.

Form 1. Notice as to Patents.
Commencement of Action.

UNITED STATES DISTRICT COURT,
District of Indiana,
Hammond Division.

Universal Oil Products Co.,
vs.
Standard Oil Company, (Indiana). } No. 33—Equity.

To the Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922, notice is hereby given as to the above entitled action:

1. The action was commenced: January 28, 1926.
2. The names and address of the litigants are:

Universal Oil Products Co., Chicago, Illinois.
Standard Oil Company, Whiting, Indiana.

3. The action includes patents having following designating number, date and inventors.

2693 Patent Nos.	Dates of Patents	Inventors
1,123,502	January 5, 1915	Jesse A. Dubbs
1,392,629	October 4, 1921	Carbon P. Dubbs
1,440,772	January 2, 1923	Carbon P. Dubbs
1,484,445	February 19, 1924	Carbon P. Dubbs
1,488,325	March 25, 1924	Carbon P. Dubbs
1,522,425	January 6, 1925	Carbon P. Dubbs
1,517,830	December 2, 1924	Gustav Egloff
1,525,281	February 3, 1925	Carbon P. Dubbs
1,546,634	July 21, 1925	Harry P. Benner
1,550,607	August 18, 1925	Carbon P. Dubbs
1,568,400	January 5, 1926	Carbon P. Dubbs

Dated: August 26th, 1926.

Respectfully,

William R. Kappes,
Clerk,

By Maude B. Swank,
Deputy Clerk.

(In pencil): 283673-53

2694 PX 568.

(Stamp) Mail Room May 18 1931 U. S. Patent Office.
Form 789

District Court of the United States

District of Delaware.

Honorable Commissioner of Patents,
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (42 Stat. L. 392), you are advised that there was filed on the eleventh day of April, 1930, in this court an action, suit, or proceeding No. 783 In Equity, entitled:

Name Universal Oil Products Company, a corporation of South Dakota, Plaintiff,
Address Chicago, Illinois,

versus

Name Standard Oil Company of New Jersey, Defendant,
Address a corporation of Delaware,
brought upon the following patents:

	Patent No.	Date of Patent	Patentee
1.	1,123,502	Jan. 5, 1915	Jesse A. Dubbs
2.	1,281,884	Oct. 15, 1918	Milon J. Trumble
3.	1,392,629	Oct. 4, 1921	Carbon P. Dubbs
4.	1,488,325	Mar. 25, 1924	Carbon P. Dubbs
5.	1,522,425	Jan. 6, 1925	Carbon P. Dubbs
6.	1,525,281	Feb. 3, 1925	Carbon P. Dubbs
7.	1,534,927	Apr. 21, 1925	Carbon P. Dubbs
8.	1,546,634	July 21, 1925	Carbon P. Dubbs

2695 ~~*In the above entitled case, on the* _____ *day of* _____, *193* , *the following patents have been included by* _____ *(insert amendment, answer, cross bill, or other pleading):*~~

	Patent No.	Date of Patent	Patentee
9.	1,549,352	Aug. 11, 1925	Carbon P. Dubbs
10.	1,550,568	Aug. 18, 1925	Robert T. Pollock
11.	1,550,607	Aug. 18, 1925	Carbon P. Dubbs
12.	1,628,270	May 10, 1927	Robert T. Pollock
13.	1,638,735	Aug. 9, 1927	Lyman C. Huff
14.	1,686,654	Oct. 9, 1928	Carbon P. Dubbs
15.	1,703,100	Feb. 26, 1929	Carbon P. Dubbs

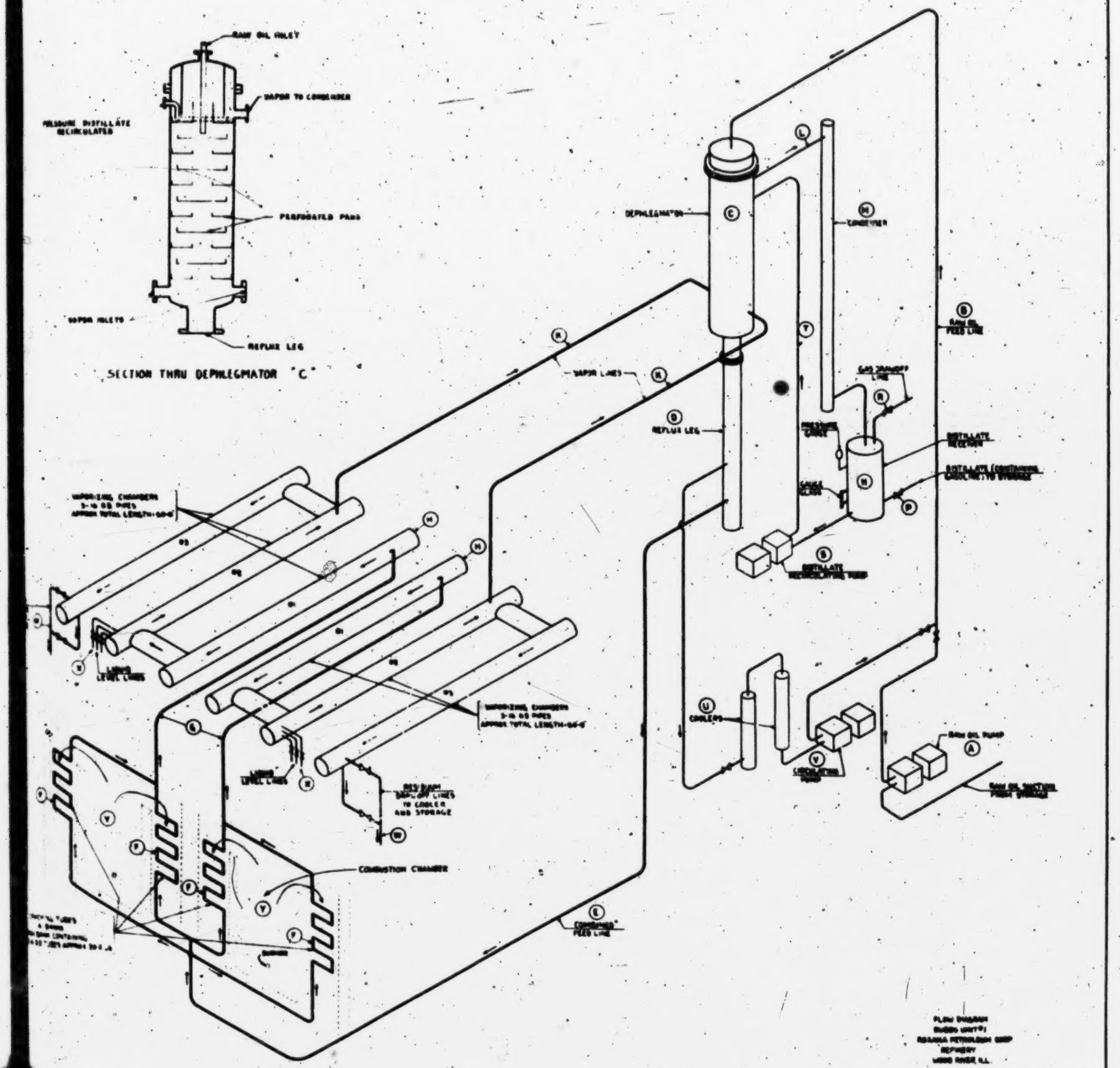
In the above-entitled case the following decision has been rendered or decree issued: May 7, 1931. Final consent decree dismissing bill of complaint.

In Witness Whereof I have affixed my hand this eighteenth day of May, 1931, at Wilmington, Delaware.

H. C. Mahaffy, Jr.
Clerk of said Court.

(In pencil): 283673
75

SECTION THRU DEPHLEGMATOR "C"



PLAN DIAGRAM
SHOWN UNIT(S)
ROXANA PETROLEUM CORP
REFINERY
WOOD RIVER, ILL.